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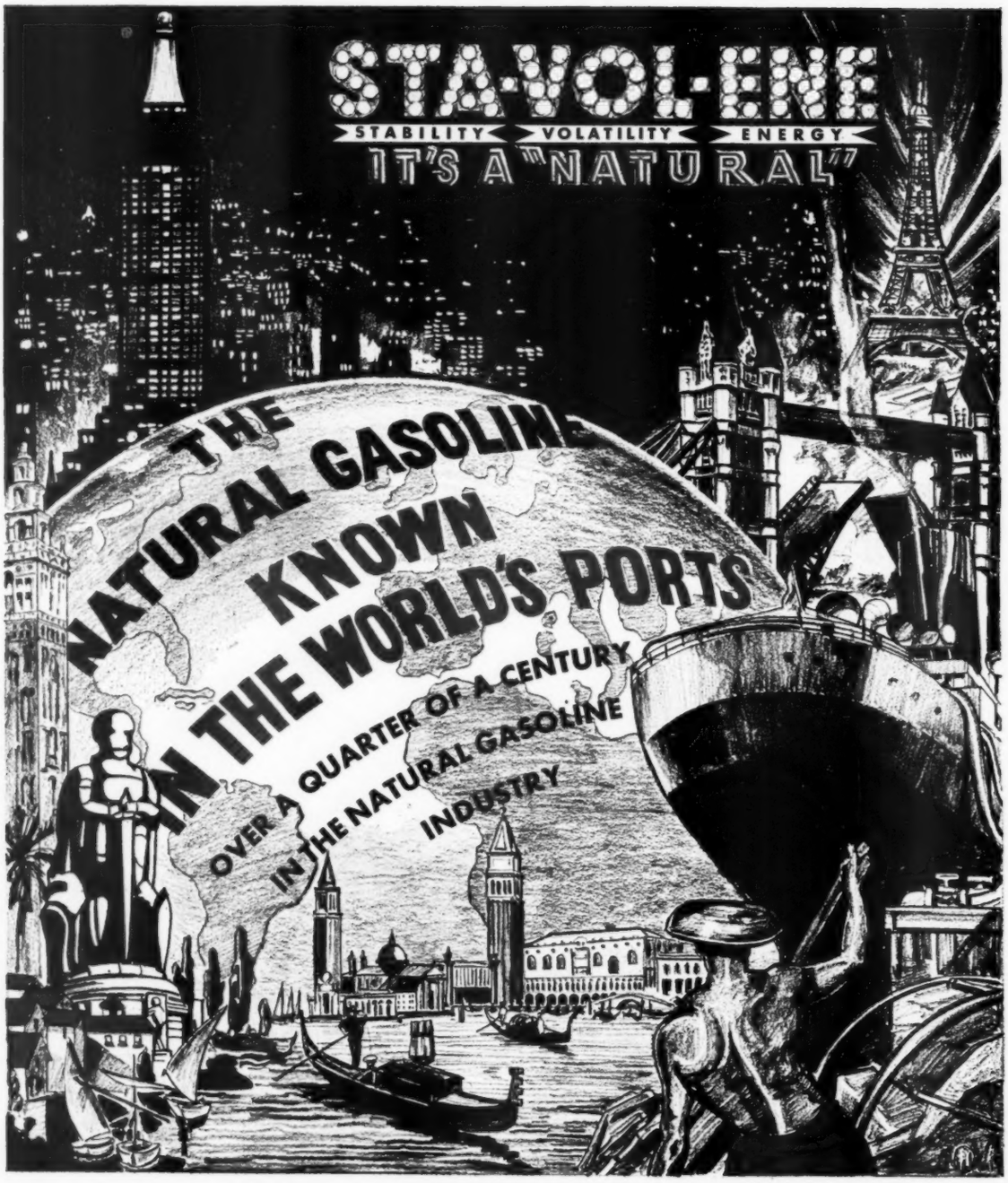
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Production Less Despite Gain in Texas

CRUDE-OIL production dropped below 3,000,000 barrels daily last week for the first time in almost two months despite an increase of 19,421 barrels daily in Texas output. The decrease of 32,268 barrels daily for the entire country was brought about by a reduction of 33,050 barrels in Oklahoma and smaller declines in the other principal oil-producing states with the exception of Texas.

Unless Texas reduces its output the decline of the past week probably will prove to be temporary, although the country's production was 150,000 barrels daily in excess of requirements as estimated by the Bureau of Mines. Oklahoma production last week was below the state allowable and output of several other states was less than the September averages.

Texas promptly stepped up its production to within 3,000 barrels daily of the state allowable for October, which represented an increase of 54,000 barrels over the September allowable and 73,000 barrels above the Bureau of Mines recommendation. Officials of the Texas Railroad Commission have explained that crude buyers in that state have said that they need this large production to take care of their October commitments to refiners. The same officials have indicated that output will be reduced if later in the month it becomes apparent that part of this crude is not being consumed currently and is being added to storage.

It is claimed that this enlarged Texas output in no way affects the existing outlets for Oklahoma and Kansas crude, but does concern Louisiana, which in recent months has paid no attention to market allocations and has greatly increased its production. It is said that the larger output will permit Texas to regain certain crude outlets lost to Louisiana earlier in the year. Meanwhile an Oklahoma producer has filed a petition with the Corporation Commission to increase Oklahoma's output 50,000 barrels to offset the larger output of Texas. The several angles to these market disputes including contentions that the government's estimates of crude requirements have been too low in recent months probably will come to a head later in the month.

Production 2,992,055

Decrease 32,268

The crude market is generally firm with improvement noted in refinery markets. The most important price advance of the week was the 5-cent increase in Bunker C fuel oil prices along the Atlantic Seaboard and the Gulf Coast. Scattered price advances materialized in residual and light fuels at other points. There were no changes of a general nature in refinery or tank-wagon markets on motor fuels. The only weakness reported is confined to the low-octane grades, the outlets for which are becoming more and more restricted because they do not give satisfactory service in the high-compression engines of the newer cars.

Daily Average Production for Week

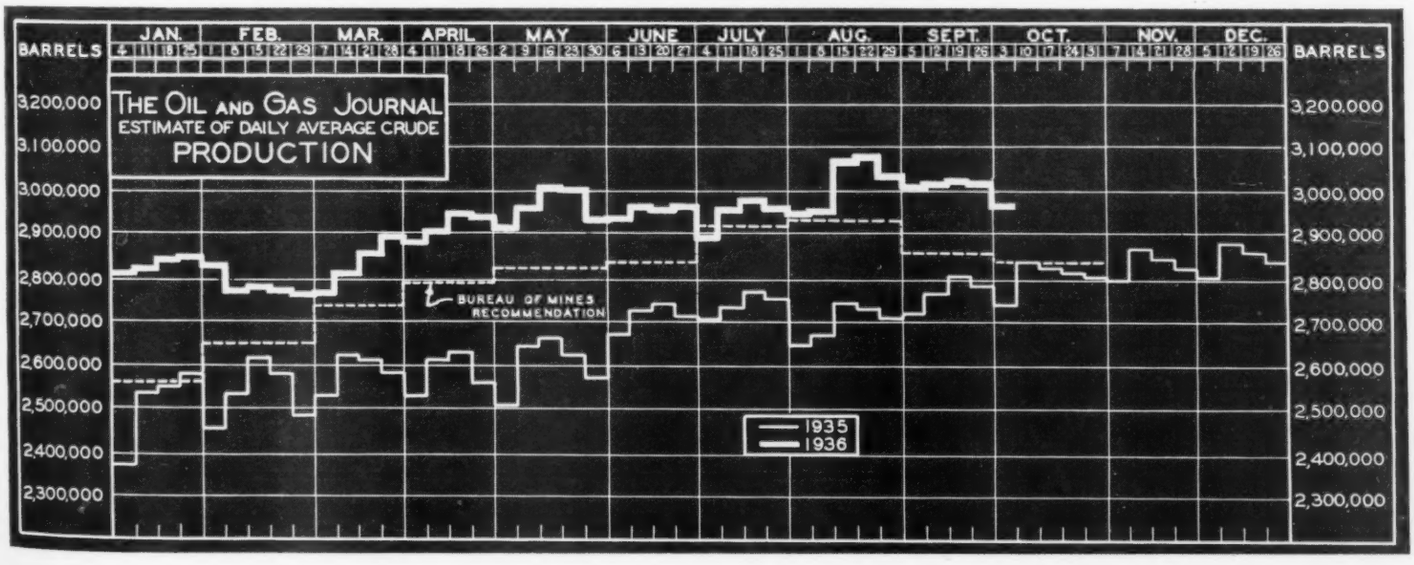
	Oct. 3 1936	Bur. Mines Oct. est.	Oct. state allowable	Sept. 26, 1936
Oklahoma City	131,950	.....	.....	143,500
Seminole-St. Louis	93,150	.....	.....	95,800
Remainder of State	322,425	.....	.....	341,275
Total Oklahoma	547,525	559,900	559,000	580,575
East Texas	444,036	.....	.....	441,884
West Texas	172,345	.....	.....	166,850
North Central Texas	88,512	.....	.....	87,446
Texas Panhandle	61,294	.....	.....	61,897
East Central Texas	70,787	.....	.....	64,089
Gulf Coast—Texas	255,361	.....	.....	252,249
Southwest Texas	84,349	.....	.....	82,848
Total State of Texas	1,176,684	1,106,900	1,179,948	1,157,263
North Louisiana	77,990	.....	.....	80,845
Gulf Coast—Louisiana	157,695	.....	.....	157,800
Total Louisiana	235,685	189,300	235,200	238,645
Santa Fe Springs	42,750	.....	.....	43,400
Long Beach	65,250	.....	.....	66,250
Kettleman Hills	78,100	.....	.....	77,900
Remainder of State	378,150	.....	.....	380,700
Total California	564,250	535,300	*544,000	568,250
Kansas	157,800	155,000	155,000	170,175
Arkansas	28,225	29,600	.....	28,005
Eastern Fields	112,900	106,300	.....	113,100
Michigan	29,736	30,000	.....	29,800
Southeastern New Mexico	76,120	73,100	80,055	75,900
Rocky Mountain area	63,130	56,900	.....	62,610
Total United States	2,992,055	2,842,300	.....	3,024,323

*Recommendation of Central Committee of California Oil Producers.

Crude Oil Stocks in United States

(BUREAU OF MINES ESTIMATES)

Week ending September 19, 1936	297,950,000 bbls.
Week ending September 12, 1936	298,448,000 bbls.
Week ending September 21, 1935	322,079,000 bbls.



SPARKS FROM THE NEWS

American Way

The Interstate Compact underwent a severe strain last week when Texas and Oklahoma members interrupted a conference with Kansas representatives to listen to a Democratic campaign broadcast.

Better Topic

The current arguments regarding demand are at least a change from the long period during which oversupply occupied the center of the stage.

And How!

Petroleum power, according to recent report, has expanded American citizens' general effectiveness 36 times. Tax collectors have this beat.

Strike Out

California's answer to charges that her large increase in production has disturbed domestic markets is to point out that less oil has passed eastward through Panama Canal.

Cold Wave

Early seasonal demand for all grades of fuel and burning oils indicates problem of supply will be more acute than last year.

Out of Turn

Mid-Continent states wrangling as to who has lowest allowable per well should look to Eastern fields where they get along with a fraction of barrel per day.

Back-Track

Deep-sand prospects in eastern states are causing some Mid-Continent operators to recross the Mississippi River.

Deep South

The race for the deepest producing well continues. This week the Lafitte field in Coastal Louisiana leads at a depth of 9,974 feet.

One Less Detour

Oil is one of the industries whose international trade will benefit through a stabilization of currencies.

Night Riders

Night drivers are complaining of poor lighting in Rodessa as gas conservation enforcement reduces number and size of flares.

Boomerang

The small distributors who sponsored antichain legislation to weaken competition now find themselves surrounded with it, in the form of independent dealers.

Multum in Parvo

The 5-cent advance in bunker oil means $2,000 greater fuel bill for larger liner on round-trip to Europe.

C-rude Retort

A Texan says California's refusal to change crude allowables with the seasons is part of the customary propaganda regarding the West Coast climate.

Illustration

The distributor who evades gasoline taxes has the competitive advantage of having two gallons and paying for only one.

By Cracky!

More gasoline is now cracked from fuel oil and gas oil than is skimmed from the crude by natural distillation.

ROD-LINES IN THE AIR

Stretched high over the highway near Rew, Pa., in the Bradford field

Left to right: Elwood Fouts, behind Col. E. O. Thompson, Texas; Gov. E. W. Marland, Okla.; Marvin Lee and Homer Hoch (behind Lee), Kansas; Pierre LaFleiche, Wyo.; and Wm. Bell, Ill.

Disputes on Markets Fail to Disturb Oil Compact

By C. O. WILLSON

OKLAHOMA CITY, Okla., Oct. 2. Harmony instead of the feared discord prevailed today at a meeting which marked the close of the first year of the Interstate Compact Commission. At the formal session of the commission held this morning at the State Capitol everything was done that could be done at this time and plans were laid to continue and enlarge the scope of the commission's activities.

Problems centering around the action of the Texas Railroad Commission in increasing that state's October allowable so that it is substantially greater than the Bureau of Mines recommendation are yet unsolved, but they appeared less ominous in the light of today's developments. Col. E. O. Thompson, chairman of the Railroad Commission and the newly elected chairman of the compact, continues as one of its strongest supporters but has not retracted from his position announced earlier in the week that Texas was entitled to a larger share of the total crude market. He also contends that crude oil requirements as projected from month to month by the U. S. Bureau of Mines have not been a fair and accurate method of allocating production by states. Unless some change is made he has indicated that the Texas Commission will continue to ignore the bureau's recommendations as it did this month.

Little sympathy was shown for the Texas position by other states so far as the October increase in the state's production was concerned. While this and allied matters did not come up for discussion at the meeting of the Compact Commission, which is concerned only with the conservation features of oil and gas production, there was wide comment at informal gatherings yesterday and today.

The attitude of other states was indicated in the action of E. H. Moore, independent operator and major Oklahoma producer, who filed a petition with the Oklahoma Corporation Commission seeking an increase of 50,000 bbls. daily in the Oklahoma allowable for October. The present allowable of 559,900 bbls. daily is the same as the Bureau of Mines recommendation. The position of Mr. Moore is that if Texas is permitted to produce its allowable of 1,179,948 bbls. daily, which is 73,000 bbls. greater than the bureau's recommendation, Oklahoma and other states should be granted similar increases. The Moore interests are the principal producers in the Fitts pool, where production is restricted to a small percentage of the open-flow possibilities of the field. A hearing on Mr. Moore's petition will be held in Oklahoma City October 16.

E. H. MOORE

It is not believed that these developments are as serious as they might appear on the surface. This belief is based largely on the attitude of everyone toward the compact, including the Texas representatives. The essential part it has had in maintaining stable conditions over the past year was emphasized by speakers at the compact meeting and observers, including a large number of representatives of major and independent interests.

It is realized that a dispute in regard to the proper division of markets by the compacting states, involving quantities of relatively minor importance to individual producers, might undo all the cooperative work made possible by the compact. This could precipitate a flood of oil which would result in price demoralization with the threat of federal intervention always in the background.

Sensing this situation, Texas concerns are among those who have protested against the increase in the Texas allowable. These same operators will oppose any increase in the Oklahoma production later in the month. The attitude freely expressed by the various interests represented here is that the industry under the compact is making progress and differences of opinion should be ironed out by the parties concerned without jeopardizing the main objective of continued stability.

ESTIMATES TOO LOW

Some agreed with Colonel Thompson that the Bureau of Mines estimates have not been entirely satisfactory in recent months as yardsticks in determining state allowables. Correction of this situation may be accomplished before the end of the month and thus end any disputes as to what is the best method under the compact of determining the demand for crude oil.

The best evidence that the Bureau of Mines estimates have been too low, according to information made available here, is that the principal oil states have produced in excess of the recommendations, and de-

spite this fact all of the crude has been absorbed by buyers who in recent months have also been compelled to draw on their storage to supply current demand.

Among the compact states the overage of actual production in relation to monthly allowables for an 11-month period ending July 31, based on Bureau of Mines data, was as follows: Texas, 4.5 per cent; Oklahoma, 4.03 per cent; Kansas, 3.64 per cent; New Mexico, 9.71 per cent; Illinois, 5.48 per cent and Colorado 6.81 per cent. The production of the last two states is so small that it is of no consequence. For the six states the average daily average for the 11 months was 81,210 bbls.

The situation in the case of California and Louisiana, the two principal states outside the compact, is even more apparent. For the 11-month period California produced 90,770 bbls. daily in excess of recommendations and Louisiana 41,240 bbls. daily. Considering the entire industry, the overage for the 11 months was a little less than 200,000 bbls. daily over the recommendations, or any average of 8.59 per cent. It is pointed out that while this figure presumably represents production in excess of requirements, the data on stocks show there was a fairly general withdrawal from storage during this entire period, with a total decline which indicates there was a demand in excess of the production as well as the allowables.

To discuss this and other angles of the Bureau of Mines estimates, Chairman Thompson at the meeting today was authorized to appoint a committee with representation from each compact state to confer with the Bureau of Mines representatives at Washington, October 10. So far as known there is no general disposition to be critical of the bureau's recommendations to the point of finding a substitute method of arriving at the demand for crude.

The phenomenal increase in demand for refinery products this year has come as a surprise to the entire industry, and most economists within the industry as well as those outside have erred in their estimates. It is believed that through closer cooperation with the industry and some changes in methods of arriving at demand, the bureau's estimates can be corrected so that the present objections will no longer hold.

Another angle which will be discussed at the October 10 meeting has to do with the feeling that some of the states which are not members of the compact have been given more than their fair share of this year's increase. These states have paid no attention to the bureau's recommendations and have increased their output and taken markets away from other states.

As the matter now stands it is improbable there will be important developments until the conference at Washington which precedes the regular monthly meeting of the Texas Railroad Commission to determine demand for crude which will be held October 14 in Austin. In the meanwhile the Texas larger allowable will continue in effect. It has been indicated that if the larger production is not being readily absorbed in Texas by crude buyers, the allowable will be reduced the latter part of the month.

COMPACT MEETING

Gov. E. W. Marland of Oklahoma presided at the opening of the compact meeting this morning and later was succeeded by Colonel Thompson, who was elected chairman under a plan which rotates this position among the oil-producing states from year to year. Tributes to the work of Governor Marland in bringing about the organization of the Interstate Compact Commission and directing its activities over the past year were paid by Hiram Dow, member of the commission from New Mexico, and other speakers, including W. R. Boyd, Jr., executive vice president of the American Petroleum Institute, and Charles Roeser, president of the Independent Petroleum Association.

"So long as we stay within the letter of the compact there will be no question of its success," Colonel Thompson said in taking over the duties of chairman. He referred to the compacts as the "constitutional way" for the industry to solve many of its problems.

Mr. Dow was elected vice chairman of the commission and W. H. Bell, of Illinois, second vice chairman. Colonel Thompson announced that Art L. Walker, of Oklahoma City, would be reappointed secretary of the commission. Representatives of compact states in addition to those named who attended the meeting were Elwood Fouts, Texas; Homer Hoch and Marvin Lee, of Kansas; Frank Vesley, state land commissioner of New Mexico, and Tom Anglin, of Oklahoma City.

Observers from oil states which are not members of the Compact Commission included J. R. Pemberton, state umpire of California; Pierre LeFleiche, state geologist of Wyoming, and Earl D. Walker, operator, of Kentucky. A wire was received from Walter A. Jones, of Pennsylvania, expressing regret that he was unable to attend.

Mr. Hoch, chairman of the committee on conservation, reported progress in the codification of state laws and regulations which have to do with the conservation of oil and gas. This project is considered particularly important as an aid in bringing about uniform regulations within states that will facilitate the work of the commission, and also be of great aid to the industry. It was brought out in this connection that there was need of additional funds to expedite this work. An effort will be made at the coming sessions of state legislatures to provide adequate funds to carry on all phases of the commission's program.

TO EXTEND COMPACT

The next meeting of the commission will be held December 1, probably in conjunction with the annual meeting of the Independent Petroleum Association, in Oklahoma City, November 30 and December 1. At that time the states will sign a petition to have the compact continue two years. The present agreement among the states expires next year. It is assumed that the extension will be approved by the state legislatures and congress early next year. It is hoped that some of the states not parties to the compact will become members then.

Governor Marland and C. C. Brown, members of the Oklahoma Tax Commission, urged that state authorities and the industry give more thought to the seriousness of gasoline tax evasion. Governor Marland said that in his opinion this evasion has succeeded "hot oil" as the most important factor in determining markets for crude oil and refinery products.

Mr. Roeser in his talk said that a study should be made to determine the economic minimum for crude stocks. He expressed the opinion that these stocks of refinable crude above ground, now under 300,000,000 bbls., are approaching that minimum. He favors maintaining a production level which would not vary more than 200,000 bbls. daily throughout the year. He said that Bureau of Mines forecasts should include six-month periods extending from April 1 and October 1.

Wirt Franklin, independent operator and former president of the Independent Petroleum Association, urged that the limitation on imports of crude and its products be incorporated in a federal act. At present the restriction is voluntary. He commended the cooperation of the importers in restricting the imports to 4½ per cent of the total market in this country, but pointed to the possible flood of imported oils from South America as indicating the need of a legal limitation on imports.

Pacific Coast Section A.I.M.E. Fall Meeting One of the Best

LOS ANGELES, Calif., Oct. 3—The fall meeting of the Pacific Coast section, Petroleum Division, of the American Institute of Mining and Metallurgical Engineers, held in Los Angeles October 1 and 2, was attended by about 500 and it was one of the best ever held on the Pacific Coast. It was attended by John M. Lovejoy, president of Seaboard Oil Corp. and president and director of the national institute: A. B. Parsons, secretary of the institute, and George Otis Smith, former president. Hallan N. Marsh, of General Petroleum Corp., chairman of the Petroleum Division, assisted by C. P. Watson, vice president of Seaboard Oil Corp. and general chairman of the local committee, welcomed members and guests.

R. P. McLaughlin presided at the opening session and Hallan N. Marsh took over the gavel at the dinner in the University Club October 1. A. H. Bell, Continental Oil Co., presided at the opening session October 2 and W. H. Geis at the afternoon session. Friday evening a dinner meeting was held at the University Club in honor of President Lovejoy, Secretary Parsons and George Otis Smith.

Mr. Lovejoy in his address advocated the passage of legislation in California designed to control production of crude and gas. He urged a limitation on the sale of natural gas restricted primarily to domestic use for heating purposes on the premise that if manufacturing industries were denied the use of natural gas it would force operators to use more caution in production practices and would at the same time assure an ample supply of natural gas for domestic consumption for a number of years. He specifically recommended adoption of a statute similar to existing measures in Texas and Oklahoma that prohibit not only physical waste but dissipation of reservoir energy as well.

C. M. Nickerson explained the Buena Vista Hills Cooperative Development Plan.

On Friday papers were read by C. P. Walker on the Echometer, and L. R. Smith, production engineer of Associated Oil Co., discussed Butane Engine Drilling which proved of special interest. Mr. Smith's paper was followed by one prepared by Joseph Jensen, chief petroleum engineer of Associated Oil Co., on Miscellaneous Drilling Developments. R. R. Boyd, production engineer of Richfield Oil Co. and former chairman Southern California section, A.I.M.E., read a paper on the Influence of Production Practice on Gravity of Oil. W. D. Kleinpell read a paper on Newly Discovered Fields in California, and this was followed by a paper by Allen H. Hand, assistant comptroller, Union Oil Co., on Future Demand for California Petroleum Products. F. E. Minshall, assistant to the vice president, Continental Oil Co., presented a paper on the Future Supply of Oil in California.

The opening paper read October 1 on the Effect of Gas Production on Ultimate Oil Recovery at Kettleman Hills, prepared by R. E. Collom, vice president of Continental Oil Co., and C. P. Watson, vice president of Seaboard Oil Corp., resulted in considerable comment. Their views indicated that if operators continued producing gas at Kettleman Hills to meet requirements of public utilities without regard for sound engineering procedure the total recovery of the field might be reduced 50 per cent. They termed present and past methods as wasteful exploitation and called attention to the fact that 29 wells in the North Dome field are cutting in excess of 10 per cent and that 40 wells are producing on gas lift.

Prospects of pumping oil in the Kettleman North Dome field from 8,000 to 9,000 feet are considered distinctly unfavorable. It was reported that pressures in the Huffman area have declined to about 1,250 pounds and in the intermediate area to 1,400 pounds and to 1,480 pounds in the Felix area. There has apparently not been any serious drop in the extreme eastern end of the structure which for the most part is undeveloped, but the central area is now down to 2,000 pounds. A total of 16,510 acres are at present considered potentially productive, of which Kenda controls 8,210 acres, Standard Oil Co. 7,760 acres and other operators 540 acres. Five zones have been proved productive in the Temblor at Kettleman North dome, the first zone having a thickness of 300 feet, the second 275 feet, the third 175 feet, the fourth 210 feet and the fifth zone ranging from 345 feet to 425 feet.

Shell Oil Company discovery well, No. 1 Stevens, Ten Section field, Kern County

FUTURE OIL SUPPLY IN CALIFORNIA

By F. E. MINSHALL
Continental Oil Co.

California for more than 30 years has been one of the three leading oil-producing states. Present daily crude oil production, under curtailment, of approximately 580,000 bbls. comes from three general areas: Los Angeles Basin, San Joaquin Valley and the Coastal region of Ventura and Santa Barbara Counties. This state produces approximately two-thirds of its oil from eight large fields. California obtains a daily average production of 48 bbls. of oil per producing well, whereas the average for the United States is but 8.15 bbls.

During the closing stages of the first half of 1936, discovery of the Ten Section oil field was made and credit goes solely to geophysical work. It is the first direct important discovery of oil in California which may be credited to geophysics.

This discovery may furnish the cue to the means of discovering several fields in California, particularly in the San Joaquin Valley. It is a question, however, if returns from geophysical work will play as important a part in the future supply of oil in California as have our former types of prospecting.

Methods of prospecting have progressed in the oil industry due to invention or improvement in scientific means of locating and defining structure and to marked improvements in drilling equipment. Present-day methods of prospecting include:

1. A detailed study of geology in an attempt to locate structural and stratigraphic conditions which would be favorable to the accumulation of oil.

2. Geophysical methods involving the use of the seismograph, torsion balance, magnetometer and electrical methods.

3. Use of micropaleontology as an aid in correlation.

There is still much to be learned in California in the application of geophysical methods.

The principal improvements in drilling equipment are:

1. The Schlumberger dipmeter which determines the direction of formation dip in an uncased hole.

2. The geoanalyzer—an automatic electric logging device.

3. Stratigraph—an electrical logging device used in detecting shale bodies through the casing in bore holes.

4. Halliburton formation pressure recorder which records changes of formation pressures during formation or shutoff tests.

5. Controlled directional drilling.

6. Unitized rotary drilling machinery.

7. Wire line core bits.

Developments of special significance in California during the first half of 1936 were as follows:

1. The discovery of the Padre Canyon oil field, Ventura County, in March by Continental Oil Co. upon completion of its well, No. 1 Hobson, at a depth of 5,501 feet, producing 570 bbls. per day 30-degree plus gravity oil.

2. Completion of the first large well in the Santa Maria Valley field by Union Oil Co. This completion had an initial daily flow of 2,380 bbls., 16.4 degrees gravity, at a depth of 2,576 feet.

3. The discovery by Shell Oil Co. of the Ten Section field, Kern County, on June 2, 1936, with its No. 1 Stephens well producing 800 to 1,000 bbls. daily, 61 gravity, 15,000,000 feet of gas, at a depth of 7,888 feet.

For the purpose of comparison, California's total production for the year 1929 to the first

***A.I.M.E.*—Paper delivered before Pacific Coast meeting, Petroleum Division, Los Angeles, October 1-2, 1936**

half of 1936, inclusive, is listed below in yearly totals and as daily averages:

CALIFORNIA TOTAL PRODUCTION

Year—	Yearly totals (bbls.)	Daily averages (bbls.)
1929	292,036,911	800,101
1930	228,099,899	624,931
1931	188,829,032	517,340
1932	178,127,794	486,688
1933	173,083,319	474,201
1934	175,678,362	481,310
1935	207,899,520	569,587
1936, first half	108,160,769	594,289

Production of oil in California has been curtailed since 1929. The amount of curtailment below actual potential during the period has been conjectural. It is certain that the differences between actual potentials and the curtailed rate was much less than indicated by the umpire's figures. In other words, potentials generally and in detail were fictitiously high. During 1936 some fields, notoriously wide open, could not make their allowables, let alone their potentials.

Overproduction problems in California appear to be solved unless a series of new pools are discovered in rapid succession.

EIGHT LEADING FIELDS

The eight leading fields last year and their total production were:

	Bbls.
Kettleman Hills, North dome	27,569,892
Midway-Sunset	20,243,760
Mountain View	9,239,871
Ventura Avenue	10,986,096
Dominguez	7,913,492
Huntington Beach	15,185,343
Long Beach	26,487,238
Santa Fe Springs	16,163,733
Total	133,789,425
All other fields	74,110,095
Total California	207,899,520

CALIFORNIA PAST PRODUCTION AND RESERVES

This discussion cannot progress far without mentioning some figures.

TABLE 1

	No. prod. wells	Proved acreage	Devel. acreage	Dev. acres per well
Coastal	1,676	28,470	18,600	11.1
Los Angeles Basin	5,631	18,870	16,454	2.9
San Joaquin Valley	9,530	102,119	65,481	6.9
Total	16,837	149,459	100,535	5.9

TABLE 2—CALIFORNIA PAST PRODUCTION AND RESERVES

	Past production July 1, 1936	Estimated future production	Estimated ultimate production
Coastal (includes misc.)	432,783,915	270,363,986	703,147,901
Los Angeles Basin	2,182,955,349	569,811,923	2,752,767,272
San Joaquin Valley	1,950,375,024	1,875,625,077	3,826,000,101
Total	4,566,114,288	2,715,800,986	7,281,915,274

	Past production per proved acre	Est. ultimate per proved acre
Coastal	15,200	25,000
Los Angeles Basin	116,000	145,000
San Joaquin Valley	19,100	37,500
Total	30,600	49,000

Oil fields of California produced 4,566,114,288 bbls. of oil to July 1, 1936, an average production of 45,600 bbls. per developed acre. At the same date there were 149,459 acres of proved oil land in California, approximately two-thirds of which has been developed. Table 1 shows the relation between number producible wells, proved acreage, developed acreage and acres per well in the three principal districts.

Interesting facts gathered from Table 1 are:

Los Angeles Basin fields are for comparison practically fully developed with an average of 2.9 developed acres per well.

San Joaquin Valley contains a large majority of undeveloped proved acreage.

Facts on "Future Supply of Oil in California" are gathered from all available sources and this mass of information is classified, correlated and used as a basis in making estimates of reserves. Such data on oil reserves is valuable if used correctly in making general forecasts for supply and demand and in comparing past production of various fields with future supply.

On the basis of an estimated ultimate production of 7,281,000,000 bbls. for the state, future supply of oil in California approximates 2,716,000,000 bbls. Table 2 shows the relation between past production and future reserves in the three principal districts.

No estimates of reserves for the three discoveries made during the first half of 1936 are included in Table 2 as very little is known as to the extent of these new fields.

Most of California's production and reserves are in the Pliocene and Miocene rocks of Tertiary age. Rocks older than Miocene supply very little of the production.

Table 3 and Chart 1 shows comparison of estimates of California oil reserves, annual past production, and cumulative production in tabulated and graphic form. The various estimates of ultimate production are shown by an X in a circle. In studying the attached chart it is noted that the various estimates of ultimate production occur at

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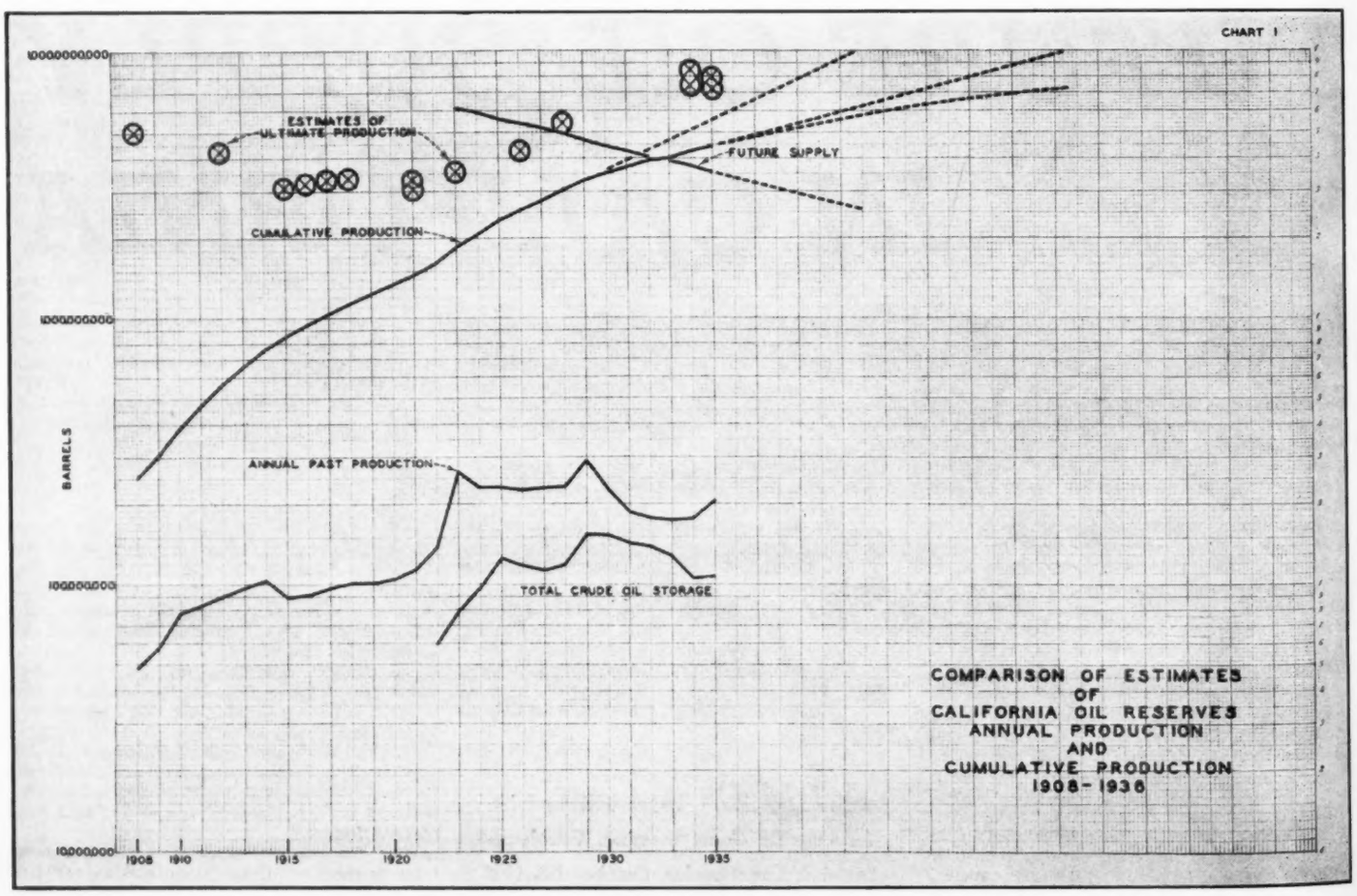
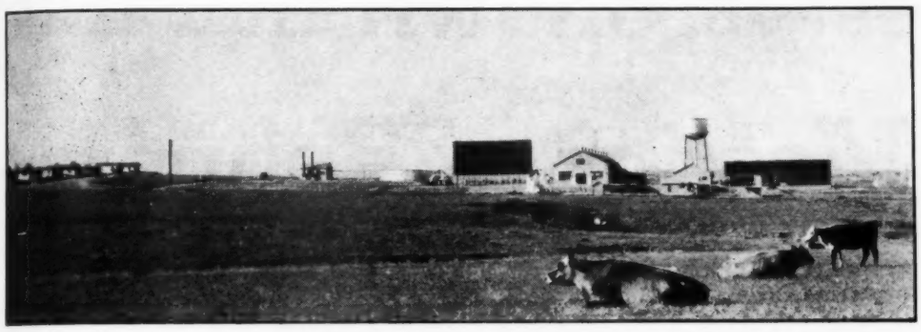


Larger Area of Exploration for Oil Expected in Panhandle

By L. G. E. BIGNELL

AMARILLO, Tex., Oct. 3.—Conditions in the Texas Panhandle oil and gas fields are good with the completion of about 30 to 35 oil wells each month and a new outlet for some of the natural gas provided by the completion of a zinc smelter near Dumas, Tex. The daily allowable of oil for this district for October has been placed at 59,485 bbls. by the Railroad Commission of Texas and there were about 2,892 producing oil wells recorded on October 1. An important deep test is being drilled by Phillips Petroleum Co., No. 1 G. W. Porter in section 35, Block A-8, H&G.N. Survey in Wheeler County. It is about 5,545 feet deep and entered into the granite wash section of Pennsylvanian age at about 3,000 feet and is still drilling in this formation. Another well about 2 miles north and east of No. 1 Porter drilled by Lela Oil & Gas Co. carried as No. 9 Laycock in section 9, Block 27, H.&G.N. Survey in Wheeler County, encountered the granite wash at 2,100 feet and had only about 250 feet of this formation and was completed in Arbuckle Limestone at about 2,350 feet.



Lefors, Gray County, gasoline plants

It is estimated, after a check of ownership maps of the five oil producing counties in the Panhandle, that there are about 88,300 productive and proven acres of oil land in this district. This acreage is divided as follows:

County—	Acres
Wheeler	6,720
Gray	35,200
Carson	12,800
Hutchinson	32,000
Moore	1,600
Total	88,300

As stated there were 2,892 producing wells on this proven acreage as of October 1 and it is estimated about 500 additional wells have been drilled and either were dry or have been produced to depletion. This makes a total of 3,392 wells and gives a well spacing of one well to about 26 acres. To drill this acreage to a density of one well to 10 acres will require completion of about 5,400 more wells.

This does not mean it will be necessary to drill any appreciable number of these wells in the immediate future because the present allowed potential for the oil wells in this district is 773,821 bbls. daily. It is estimated the actual critical rate of production the present wells could maintain after open flow production for a period of from a few weeks to three or four months would not exceed 150,000 bbls. daily. This is about 90,000 bbls. more than the current allowable and drilling of additional wells will therefore be limited to completion of only such extra wells as needed to maintain lease allowables.

In addition to the oil producing area there are about 1,500,000 acres of gas land. On this acreage there are between 1,300 and 1,400 gas wells now producing. Well spacing for proration purposes is set at 160 acres per well for the east zone and 640 acres per well for the west zone. It is true actual well spacing is closer in many areas. The additional gas wells required to recover completely the gas from this reserve will depend upon future developments. These figures of available undrilled locations indicate in some degree the future possibilities of work in this great gas and oil field which is about 200 miles long from east to west and varies in width from 10 to 50 miles. Whatever work is done in developing the area will be governed largely by economic conditions and it is admitted, with oil priced at more than 98 cents per barrel, present top price, the area to be explored for oil will be greatly increased over the 88,300 acres now regarded as proven territory. Some estimates place this additional probable oil land as high as 125,000 acres but this figure may not be accepted by others.

The railroad commission proration schedule for October summarizes the allocation between wells and leases in the fields of the Texas Panhandle in Table 1.

Proration has been in effect in the Panhandle since Sept. 27, 1930 and up to Aug. 25, 1935 periodical potential tests varying from 5 to 10 days were made to determine well capacities. Since Aug. 25, 1935 potential tests have been for a 24-hour period only. The present potential of 773,821 bbls. daily has been arrived at by carrying forward some old potentials taken before the 24-hour tests became effective and potentials taken since then and all new wells drilled between August, 1935, and Oct. 1, 1936.

Since the change in method of taking potentials went into effect last year it has been the rule to decline well potential 12½ per cent for the first period of 60 days if the well has been shot or acidized during that period after its completion, or to lengthen this period to 90 days if the well has not been so treated. This rate applies only to wells having 500 bbls. or less daily potential.

For wells making between 500 and 3,000 bbls. daily the method of arriving at decline is to multiply the last potential secured by gauge by .305 and add 285 bbls. to this figure. For example, if a well made 750 bbls. on potential test that figure is multiplied by .305 giving 228.75 bbls. and to that figure is added 285 bbls. making the well's potential 513.75 bbls. This method gives a straight line decline for wells above 500 bbls. potential, with wells making 3,000 bbls. daily receiving a 60 per cent cut each potential period.

The well allowable is arrived at by deducting the 20 bbls. marginal allowable from the potential and multiplying the difference by a factor established by the commission each month. At this

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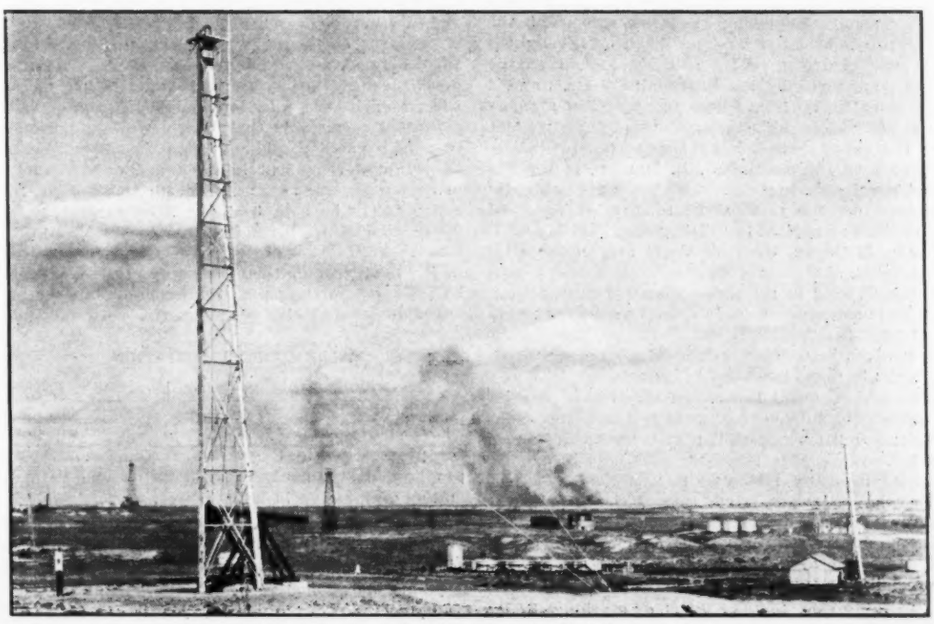
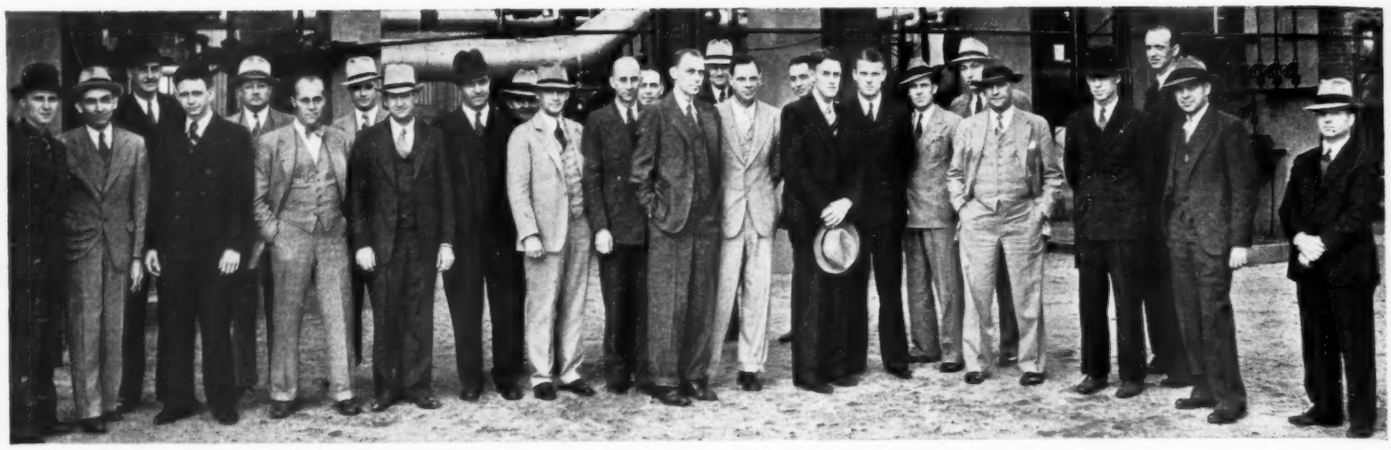


Part of Panhandle oil field



Many refinery superintendents and engineers attending the W.P.R.A. meeting at Wichita visited the Barnsdall refinery there. This group was assembled before the new cracking unit while others were inspecting the new copper chloride treating unit and the new electrolytic desalting equipment

Great Interest Is Shown in First Technical Meeting of Refiners

By W. T. ZIEGENHAIN

Judging from the large number of refinery operators present and the interest shown in the discussion which followed each of the three papers delivered before the first regional technical meeting sponsored by the Western Petroleum Refiners Association held in Wichita, Kans., on October 6, the series of three such meetings planned to be held at scattered points in the Mid-Continent this fall seems assured of unusual success.

The Wichita meeting was attended by more than 90 refinery superintendents, operators, research men and equipment engineers, who heard discussed in the most intimate terms, three refinery operating problems of immediate interest, namely the electrolytic desalting of crude oil, recent developments in small cracking plant design and the use of copper chloride as a light oil treating reagent. Following the presentation of the papers, Emby Kay, vice president of Skelly Oil Co. and chairman of the meeting, announced the invitation given by the Barnsdall Oil Co. to visit its plant in Wichita where the practical application of these could be seen. Many of those present at the meetings took advantage of the invitation. In opening the meeting G. B. Hanson, of the Petroleum Rectifying Co., described an electrolytic method for the removal of salt water from oil emulsions as applied to refinery operations in California, Michigan, the Gulf Coast and in the Mid-Continent. He said that the same general procedure is used in refineries when dehydrating the oil as is commonly used in the oil producing fields but that new problems are constantly presenting themselves in refinery work. The process utilizes a high electrical potential to break down oil emulsions and in order to produce one which may be most easily broken the process sometimes calls for the addition of substantial quantities of fresh water. While this produced unusually favorable results in many instances it was also apparent that the procedure would aggravate an already serious water disposal problem among some refiners. A. M. Ballard of the Dickey Refining Co. stressed the need for solution of this problem, especially among Kansas refiners.

Turning then to the subject of cracking, R. P. Mase of the Burrell-Mase Engineering Co. summarized trends in Mid-Continent cracking operations briefly by pointing out that: (1) Topped crude is the most common charging stock. (2) Putting the whole charging stock through the furnace coil is being practiced increasingly, because high yields of cracked gasoline results, also, a better fuel oil. (3) Two-coil separation is a desirable development since higher octane gasoline results. (4) Lower first cost of units is being achieved by the simplification and improvement of design and not by cheapening construction. (5) Important developments in the design of tube furnaces and reaction chambers has permitted better results in operation. (6) Fractionation is being carried out at more favorable pressures. (7) Controlled heating curve for the light oil coil and high velocity low-time exposure of heavy oil within the furnace give better results. (8) Open type condensers are being successfully used. (9) Vapor recovery and stabilization equipment has been simplified and effectively combined with the cracking unit. (10) Polymerization is probably the next logical development. In discussing polymerization more fully, he said, "At this time, polymerization of unsaturated compounds (principally olefins) present in cracking still gas bids fair to become the next important development in the cracking art. Various processes are now available to refiners but it can scarcely be said that the art has been perfected to the point where a moderate sized unit can be profitably operated. We believe that within the next year or two, details of processing will be improved to the point where smaller refineries will find it profitable to polymerize their gas.

VALUE OF POLYMERIZATION

"The value of polymerization lies in part in the fact that additional gasoline is produced from gas that is now used as fuel, but the larger value of the process lies in the fact that the gasoline so produced has an extremely high octane rating and an even higher blending power, so that a small amount of gasoline so produced can be used to raise the octane number of all the cracked gasoline."

When questioned regarding the size of the refinery which might ultimately justify the installation of a polymerization unit, Mr. Mase replied that too many factors entered into the problem to permit making a definite line of demarkation between those plants which might justify such units and those which could not, but he indicated that he thought any refinery which had 3,000,000 to 5,000,000 or more feet of cracked gas available daily, a unit of the improved and smaller size will probably be justified.

Turning then to the final paper which was prepared by W. A. Schultze of the Phillips Petroleum Co. and L. S. Gregory of the company which bears his name, Mr. Schultze described the treating procedure and outlined the cost of operating a copper chloride unit.

The procedure and a general description of the process was given in the paper, some of which appeared in The Oil and Gas Journal, October 17, 1935, page 42, and then Mr. Schultze gave an extended analysis of the results obtained in operating such units over a long period of time. He said:

"More than 20 copper treating installations have been made within the last couple of years. A vast amount of data on chemical costs, operation, etc., have been secured. We feel that each installation should be considered separately since many of the factors are dependent on local conditions. As one example, however, attention is directed to a small plant recently installed. This plant is operated by an independent company and because of its size is handicapped in some respects to larger plants. About 1,200 bbls. per day of severely cracked gasoline are treated by the liquid method, and 1,100 bbls. of straightrun are treated by the solid method. The cracked gasoline is extremely sour, containing 0.04 per cent mercaptan sulfur.

"Former treating costs on the straightrun gasoline were about 0.5 cent per barrel for caustic used to remove hydrogen sulfide, and about 2 cents per barrel for doctor solution. Costs to date with the copper method are about 0.1 cent for caustic, and 0.25 cent for copper reagent. As the original charge of reagent is still being used after six months' operation, and is expected to last another six months, the ultimate reagent cost is predicted to be below 0.1 cent per barrel. Power costs are considered to be the same as formerly, since the same pumps are used. The air used has been mostly taken from the regular plant supply, without noticeable increase in the time the compressor runs. There has been no repair expense to date.

Future Demand for California Petroleum Products

By A. H. HAND
Union Oil Co. of California, Member A. P. I. Committee on Supply and Demand.

When considering the question of future demand for crude petroleum in California, one must first decide whether it is to be approached in the light of the definition of "demand" when used in economics, i.e., "the quantity of any commodity required or sought in the market," or in the light of markets developed to dispose of total supply. Therefore, is the California demand of future years to be predicated on a continuation of supplying markets developed following the surplus production commencing in 1922, or predicated on supplying what would be termed economic markets? If the latter, what are economic markets?

Obviously, the Pacific Coast states and Canada, Alaska, Hawaii and probably the Pacific side of Central and South America, can be considered as normal markets for California petroleum products. While there have been small quantities of gasoline shipped into the Pacific Coast from East Texas, transportation costs, plus import taxes in the case of foreign oil, are a sufficient barrier to justify considering that these markets will be retained.

But how about our participation in Atlantic and Pacific foreign and intercoastal markets?

EXPORTS TO EUROPE

During the five years preceding 1931 California shipped substantial quantities of gasoline to the United Kingdom and to France, Germany and Italy. During recent years our business in European markets has been restricted to occasional shipments of gasoline and Kettleman crude. This loss of business is occasioned by the development of production in the Mid-Continent, principally East Texas, and in Iraq, Rumania, Venezuela and other closer producing areas, which makes it impossible at the prevailing crude oil prices for California to be competitive in supplying any substantial portion of these markets. It is therefore apparent that under a stabilized price structure that will return the California producer a reasonable price for his oil, future Atlantic foreign business will be restricted to occasional spot cargo sales.

As to Pacific foreign shipments which, in addition to Central and South America, consist principally of shipments to Japan, China, Australia and New Zealand. A considerable portion of the business we had with Australia and New Zealand up until four or five years ago is now being supplied from the East Indies. So far development of production in Russian Sakhalin has had little effect on our business with the Orient. Substantial reserves have been developed in Bahrein Island, and while it is too early to forecast what effect this supply will have on our shipments to Japan, substantial quantities of this crude are now being shipped into that country. Needless to say, if there is a considerable decline in the state's production, resulting in a materially higher price schedule for our crude, there will be a substantial reduction in our Pacific foreign business.

***A.I.M.E.*—Paper delivered before Pacific Coast meeting, Petroleum Division, Los Angeles, October 1-2, 1936**

The same situation holds true in the case of our East Coast business. With the exception of shipment of some 15,000,000 bbls. of fuel oil during 1933 and 1934, which was in effect a reduction of the excessive stocks existing in California, fuel oil movements to the East Coast have been quite limited, shipments being almost entirely gasoline. If the production in Texas, Oklahoma and Louisiana holds up as it gives promise to and the same relationship is maintained between the price schedules for Mid-Continent and California crudes, we cannot economically ship to the Atlantic Seaboard. As an illustration, our present posted schedule is based on 27 gravity Signal Hill crude at $1.10 a barrel which by straightrun operations will yield around 27 per cent of gasoline, whereas 36 gravity Oklahoma-Kansas crude, which has a straightrun gasoline yield of around 36 per cent, is posted at this same price, and 36 gravity crude in West Central Texas, with about the same gasoline content, is posted at only $1 per barrel. East Texas crude will yield about 36 per cent gasoline from straightrun operations, the present price schedule for which is $1.15 a barrel. California is at a further disadvantage by reason of the difference in transportation costs to the Atlantic Seaboard. Pipe line transportation from Oklahoma to the Gulf is quoted at 32½ cents and from East Texas to the Gulf at 12½ cents a barrel while steamer rates are now running about 22 cents a barrel from the Gulf to the Atlantic Seaboard. This makes a total transportation cost of 54½ cents per barrel for Oklahoma gasoline and 34½ cents a barrel for East Texas gasoline moved to the East Coast by water. As opposed to this, prevailing steamship rates alone from California to the Atlantic Seaboard are about 60 cents a barrel and not long ago ran as high as 84 cents. Obviously, unless some adjustment is made of the disparity in the posted crude prices, any present or continuing surplus gasoline in California shipped to the Atlantic Seaboard will have to be sold at a price that will not, after taking into consideration the realization from the other products, return the posted price for crude.

With the foregoing in mind, the question then arises why during the last five years or so, has California been continuing such large shipments out of the Pacific Coast territory? Recalling the efforts put forth and the sacrifices made to reduce the production of crude oil to profitable market demands, it would be well to consider what disposition has been made of the production during that period.

15-YEAR RECORD

Before doing so, it is interesting to consider the increase in our Pacific Coast demand during the past 15 years and the growth of our offshore business following the development of the Los Angeles Basin fields. Also, the effect on our Atlantic foreign and intercoastal shipments of the flush production from the East Texas field starting in 1931. Our gasoline consumption and shipments during the 15½ years starting with January 1, 1921, have been as set forth in the following tabulation:

GASOLINE CONSUMPTION AND SHIPMENTS

(Barrels daily)

	Pacific Coast	Pacific foreign	Atlantic foreign	Inter-coastal	Total
1921	31,000	1,000	.....	.....	32,000
1922	39,000	1,000	1,000	.....	41,000
1923	62,000	4,000	5,000	7,000	78,000
1924	56,000	3,000	12,000	8,000	79,000
1925	75,000	6,000	10,000	27,000	118,000
1926	84,000	11,000	15,000	23,000	133,000
1927	103,000	13,000	17,000	32,000	165,000
1928	109,000	19,000	23,000	46,000	197,000
1929	119,000	23,000	32,000	64,000	238,000
1930	126,000	23,000	34,000	56,000	239,000
1931	133,000	18,000	8,000	38,000	197,000
1932	125,000	21,000	10,000	23,000	179,000
1933	123,000	16,000	5,000	31,000	175,000
1934	130,000	15,000	4,000	24,000	173,000
1935	142,000	15,000	9,000	19,000	185,000
First half 1936	150,000	17,000	9,000	20,000	196,000

Taking only the last five and one-half years,

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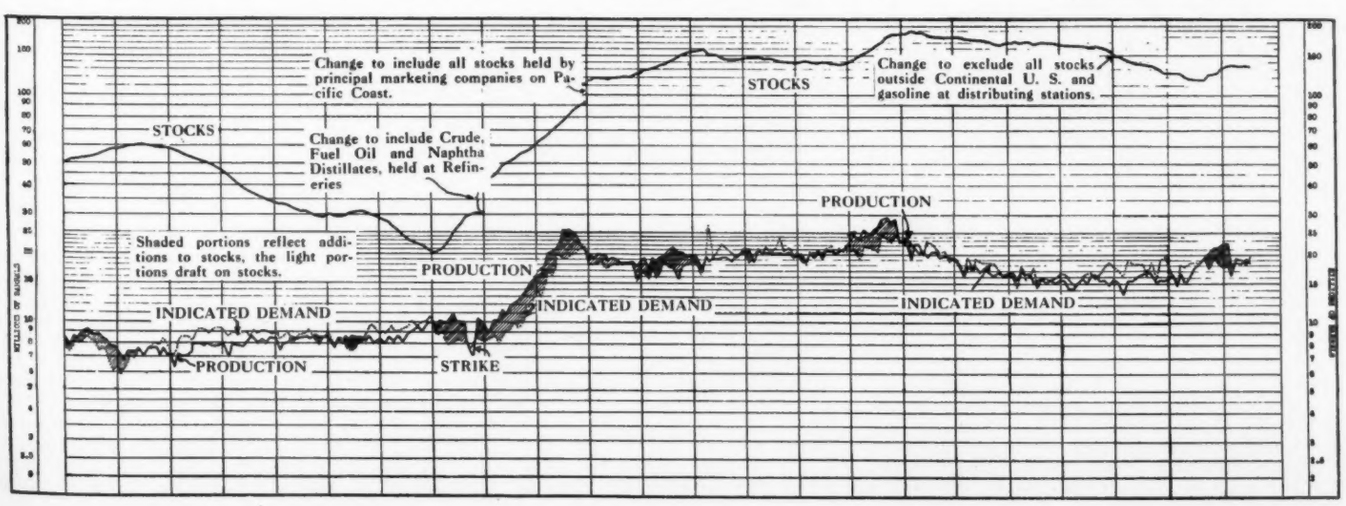

Change to include all stocks held by principal marketing companies on Pacific Coast.
STOCKS
Change to include Crude, Fuel Oil and Naphtha Distillates, held at Refineries
Shaded portions reflect additions to stocks, the light portions draft on stocks.
PRODUCTION
INDICATED DEMAND
PRODUCTION
STRIKE
STOCKS
Change to exclude all stocks outside Continental U. S. and gasoline at distributing stations.
PRODUCTION
INDICATED DEMAND
INDICATED DEMAND

Natural Gas News

Largest West Virginia Well

PITTSBURGH, Pa., Oct. 5.—The largest gas well in West Virginia was completed in the past week by United Carbon Co. on the Ahaz Spencer farm in Poca district, Kanawha County. It was completed in the Oriskany sand at a total depth of 4,845 feet with top of the sand at 4,835 feet. It gauged, before shot, in excess of 15,000,000 feet a day with a rock pressure of 1,960 pounds.

This test is on Grapevine Run, tributary of Poca River, and about a half mile south of the initial test to the lower sands in the district on the D. A. Griffith farm. The Griffith test was gauged at over 7,000,000 feet a day, with a high rock pressure.

Of equal importance is the report from the United Carbon Co. test on the J. A. and M. F. Osborne farm in Big Sandy district, Kanawha County. This test is 10 miles east of the Coopers Creek field on a west fork of Leatherwood Creek and 3 miles south of the town of Clendenin and is on the Warfield anticline axis, although at this section it has flattened out. There was about 142 feet of Corniferous lime and top of the Oriskany sand was at 5,763 feet. Twelve feet in the sand the hole filled up 500 feet with water. At 17 feet in the sand there was 1,700 feet of water in the hole. It is at present drilling at 5,788 feet with no change in the water. As this is the lower edge of the Chestnut Ridge on which there has been a lot of leasing it comes as a disappointment. It is known that in Malden district, Kanawha County, from No. 8 William Tompkins, that there is water present in this formation on the east flank of the Warfield anticline.

In Elk district, Kanawha County, United Carbon Co. completed a test on the Henry C. Smith farm about 7,000 feet north of No. 1 G. and D. Copenhaver. Total depth was 5,077 feet with top of the Oriskany sand at 5,050 feet. It gauged 5,000,000 feet a day, naturally.

In Malden district two deep wells were completed. United Fuel Gas Co. completed No. 4,657, second test on the Georges Creek Land & Mining Co. lease at 4,837 feet. It gauged 2,500,000 feet a day 12 hours after shot with a rock pressure of 1,240 pounds. No. 4,653, first test on this lease, was shot and gauged 680,000 feet a day 48 hours after shot with a similar rock pressure.

In this district United Carbon Co. completed a test on the J. Q. Dickinson farm at total depth of 4,926 feet with the Oriskany sand at 4,905-16 feet. It is a small well gauging only 50,000 feet before shot.

In Elk district, Kanawha County, the test of Columbian Carbon Co. on the Kanawha Valley Bank lease (No. 2 Grant Copenhaver farm), which was good for 2,650,000 feet a day before shot, was completed after a shot with a gauge of 9,000,000 feet and a rock pressure of 1,375 pounds at the end of 12 hours.

One and a half miles southeast of the D. A. Griffith farm in Poca district, Starcher Adams and others are drilling on the G. M. Wolf farm in Elk district, and on Aarons Fork and branch of Little Sandy Creek. It is at 1,180 feet.

Iowa Gas Company Wins

DES MOINES, Iowa, Oct. 5.—Iowa City Light & Power Co. has won its fight to substitute natural gas for manufactured gas in Iowa City. Judge Charles A. Dewey of federal district court upheld the company in every phase of its suit. The Iowa City council had filed a bill of exceptions to a report of Allen A. Herrick, master in chancery, after a hearing September 21 and 22. Judge Dewey approved the master's report, ruling that the company has the right to excavate in Iowa City streets to install gas lines; that the Iowa City council be directed to issue an excavation permit from the border station to the gas plant and distributing system; that the city be enjoined from interfering with the company in excavating or in serving natural gas instead of manufactured gas and finally that the rate ordinance passed by the Iowa City council in April, 1935, is confiscatory, void and unenforcable.

Lone Star Service

WACO, Tex., Oct. 3.— L. B. Denning, Jr., general superintendent of the Community Natural Gas Co. and Texas Cities Gas Co., said gas service had been maintained throughout the central Texas flood area. No interruption in service occurred when a Lone Star Gas Co. suspension bridge over the Brazos River at Waco went out, towns being served from this main were immediately connected with another line. The company maintained large crews in the affected area to insure an uninterrupted service.

Lethbridge Gas Inspection

LETHBRIDGE, Alberta, Oct. 3.—Following an official notice the city engineer's department is inspecting all natural gas services with a view to enforcing the proper venting of gas appliances. Where the requirements of the city gas by-law have not been complied with, Canadian Western Natural Gas Co. will be required to shut off the supply.

Repairing Gas Lines

LETHBRIDGE, Alberta, Oct. 3.—The Canadian Western Natural Gas, Light, Heat & Power Co. of Calgary is reconditioning and replacing a considerable portion of its lines in the Coaldale district.

Big Tioga County Wells

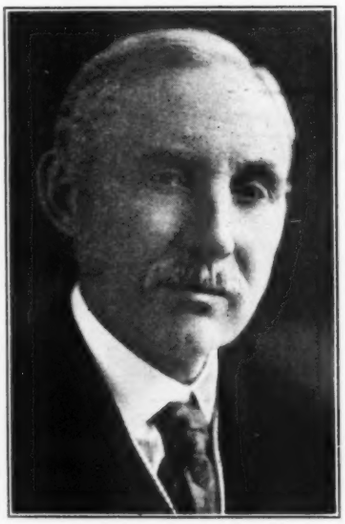
COUDERSPORT, Pa., Oct. 3.—Penn-York Co. drilled in recently a 32,500,000-foot gas well at 5,044 feet on the Barnes farm in the Tioga-Potter field. Penn United Co. brought in a 10,000,000-foot gasser in Clymer Township, Tioga County.

OBITUARIES

J. H. EVANS, 86, known throughout the oil fraternity as "Uncle Joe," and last of the founders of the Devonian Oil Co., of which he was president, died suddenly October 3 at his home in Tulsa. He was born at President, Pa., 15 miles from the Drake well. At 16 he took his first job in the oil business, hauling barrels of oil from Shamburg to Pithole, Pa. After passing from teamster to roustabout, from tool dresser to pumper, he became a drilling contractor. In 1876, at 21, he began to produce oil from five wells he drilled in Clarion County, Pennsylvania, and in 1877 developed producing property near Bradford, Pa. In 1887 he moved from Pennsylvania to Ohio where he organized the Ohio Oil Co., which, in 1889, he sold to the Standard Oil Co.

In 1891, from properties developed in New Cumberland and the Turkeyfoot areas of West Virginia, Mr. Evans and associates organized the Devonian Oil Co., operating in Pennsylvania, Ohio, Indiana, West Virginia and New York. In 1904 the company came to Oklahoma where it struck pools in Osage County.

For several years Mr. Evans was one of the directors of the Mid-Continent Oil and Gas Producers Association. He was active in organization of the Exchange National Bank of Tulsa. He was elected "grand old man of the oil industry" as the city's official host to the old-timers at the International Petroleum Exposition in Tulsa in 1928.



J. H. EVANS

HENRY CHARLES MAW, of the Canadian Oil Companies, Ltd., refinery staff, died at Petrolia, Ontario, recently, aged 56.

A. M. PINKHAM, for many years secretary-treasurer of McDougall-Segur Exploration Co. and allied organizations operating in the Turner Valley field, died recently at Calgary, Alberta.

FRANK P. GRAHAM, of Amarillo, Tex., formerly production superintendent of the Skelly Oil Co. in Kansas and in the Panhandle field, died recently at Emporia, Kans. He was a former operator in the Central West fields.

ROY N. LAMBERT, 50, vice president of the Western Oil & Fuel Co., died October 2 at Albuquerque, N. Mex.

WILLIAM A. WILLIAMS, 58, manager of gas operations for United Carbon Co., Charleston, W. Va., was fatally injured September 19 in an automobile accident near Huntington and died at St. Mary's Hospital, Huntington. He was born at Titusville, Pa., entering the employ of Carter Oil Co. in 1898 at Pennsboro, W. Va. About 1907 he became superintendent of operations for Mohican Oil & Gas Co. in Ohio, later manager of West Virginia Central Gas Co. at Weston, W. Va. After drilling as an independent for several years, he accepted the position with United Carbon Co. 10 years ago. He was widely known throughout the gas fields of Pennsylvania, West Virginia and Kentucky.

Refinery Projects

Atlantic Work Progressing

HOUSTON, Tex., Oct. 3.—Construction at Atlantic Refining Co.'s refinery near Port Arthur, Tex., is progressing rapidly and the work is expected to be completed about January 1. Contracts have been let by Atlantic Pipe Line Co., affiliated corporation, for an extension to the dock and other deep water shipping facilities, office building, mess hall and pump house. The company is adding a 20,000-bbl. combination unit, a polymerization unit of the thermal type and other refining facilities. Total cost of the project is estimated to be about $5,000,000.

Refinery Projects

HOUSTON, Tex., Oct. 3.—Influx of considerable refining activity to the Corpus Christi area is seen with the announcement of additional plants to be built. Construction has begun on a 3,300-bbl. skimming plant for the Amsco Refining Co. of Laredo, a 2,500-bbl. plant for the Terminal Refining Co. and plans are being formulated for a 6,000-bbl. plant for the Petrol Coastal Refining Co. In addition, the Corpus Christi Refining Co. new cracking unit, doubling capacity of the plant, is nearing completion. Crude from the nearby fields of Nueces County, and from Duval County will

be processed in the new plants, and products will move to coastal and foreign markets from the deep water terminals in Corpus Christi harbor.

Increases Crude Run Schedule

MUSKEGON, Mich., Oct. 3.—Interlakes Refining Co., Flat Rock, Mich., has boosted crude runs to more than 1,000 bbls. daily recently through a Mid-Continent oil supply of 1,000 bbls. a day now being received by pipe line and tank truck, it was announced last week by B. L. Snyder, vice president and sales manager.

Plan Sulphur Bluff Refinery

DALLAS, Tex., Oct. 3.—Construction of a new refinery to take crude from the new Sulphur Bluff field of Hopkins County, Texas, is planned as Dudley S. Golding and Clint W. Murchinson, of Dallas, contracted to take all production of Dilworth S. Hager, W. P. Luse and Leon Russ, discoverers of the field. There are now producers in the field and a third well is being drilled.

Completes Butane Plant

DENVER, Colo., Oct. 3.—Wasatch Oil & Refining Co. of Salt Lake City, Utah, has completed a new addition to its refinery for the purpose of supplying butane to industrialists and agriculturists in that section. It is reported that this plant will provide 6,000 gallons of butane per day for commercial purposes.

Natural Gasoline

Plan New Louisiana Plant

SHREVEPORT, La., Oct. 3.—The Ecco Oil Corp. has been formed in Caddo Parish, Louisiana, by J. P. Evans and associates of Shreveport, for the purpose of constructing a blending and absorption gasoline plant in the newly discovered Sibley field of Webster Parish. Three large gas-distillate wells have now been completed here.

Capital stock of the new firm consists of 20,000 shares of no par value common stock. Officers of the company are J. P. Evans, president; Jack Coast, vice president; and H. R. Scivally, secretary-treasurer. The board of directors include the officers and W. J. Hobby.

The newly formed corporation will only have control of the contemplated gasoline plant, and will not absorb Mr. Evans' vast lease holdings in the Sibley area.

Pipe Line Activity

Looping Gulf Line East

Work on one of the major pipe line projects of 1936 was expected to get under way by October 15, when construction was scheduled to start on extensive additions to the line of the Gulf Refining Co., Tulsa Pipe Line Division, running from Jenks, Okla., to Dublin, Ind. Specifications were sent to pipe manufacturers late in September, bids were due at the Tulsa offices by October 6 and contract was to bet let as soon as possible thereafter.

The improvement program, designed to increase the capacity of the Gulf line from Jenks to the Indiana station in order to meet an increased demand for oil from the company's eastern refineries, will include the addition of 13 loops to the main line. Total length of the loops will be 287 miles, and the pipe will be the 10-inch, seamless type, in 40-foot lengths, and will be electric arc welded. This is the same size as the original line, which was laid in 1930 and is 653 miles long. The loops are to be located so as to avoid the rough Ozark country as much as possible and to eliminate stream crossings. Two of the loops will be in northeastern Oklahoma, five in Missouri, three in Illinois and three in Indiana.

Location of the loops and length will be as follows: Near Inola, Okla., west from Strang station, 22.6 miles; east from Strang station, 17.3 miles.

Near Monett, Mo., west from Monett, 11.9 miles; east from Monett to Marionville, 18.10 miles.

Near Springfield, Mo., east from Strafford station, 23.10 miles.

West from Steelville, Mo., 26.16 miles; east from Steelville, 26.90 miles.

Near Belleville, Ill., west from Breese station, 23.40 miles.

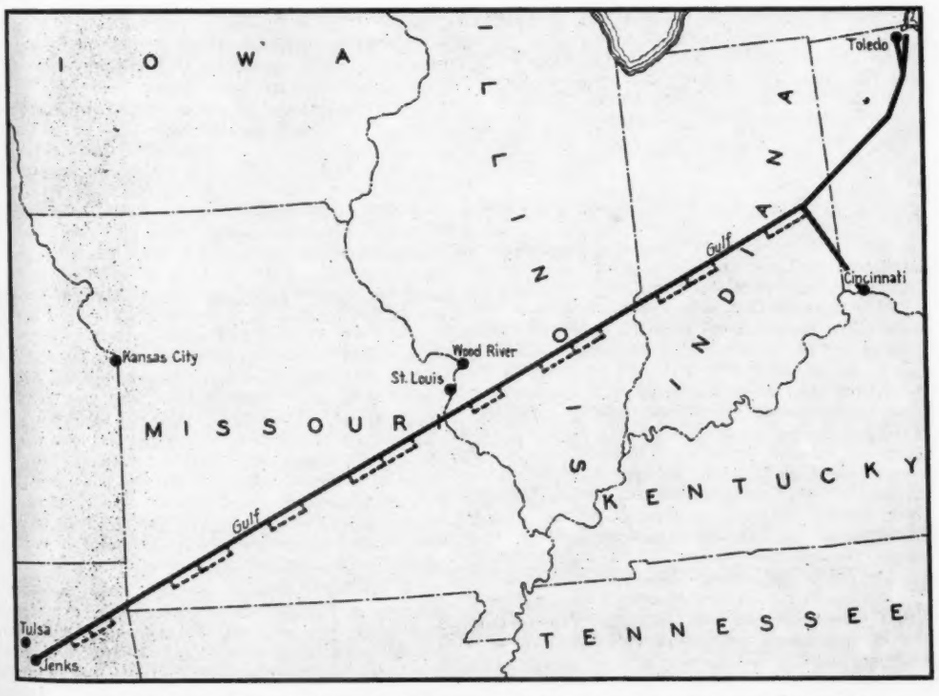
Near Effingham, Ill., west from Edgewood station, 22.65 miles; east from Edgewood station, 25.30 miles.

Near Terre Haute, Ind., west from Jordan station, 24.10 miles; east from Jordan station, 24.28 miles.

Near Indianapolis, Ind., west from Dublin station, 22.05 miles.

In addition to laying the loops, the Gulf company has started installation of 6 by 18 horizontal triplex pumps at each of its 12 stations along the main line from Jenks to Dublin. With these additions, each station will have three pumps, providing stand-by units at each booster station and assure the company of capacity power for moving the fluid through the line at all times.

The additions were made necessary by the continued increase in demand for petroleum products in the east, it was said. The extra oil that will be required will come from the Gulf company's own wells in Oklahoma, with additional oil needed being bought from other Oklahoma producers.



Map showing location of 13 loops of 10-inch pipe to be laid along the main line of the Gulf Refining Co., Tulsa Pipe Line Division, from Jenks, Okla., to Dublin, Ind.

Pipe Line Income

WASHINGTON, D. C., Oct. 5.—Stanolind Pipe Line Co. had the largest net income of 53 pipe line companies which reported to the Interstate Commerce Commission on financial and operating conditions during 1935.

Stanolind reported a net income of $8,800,676 for the year, compared with $6,797,017 for the Humble Pipe Line Co. Other large totals included: Magnolia Pipe Line Co., $5,275,959; Great Lakes Pipe Line Co., $4,442,182; Sinclair Prairie Pipe Line Co., $5,354,780; Shell Pipe Line Corp., $5,506,052; Texas-Empire Pipe Line Co. (Delaware), $4,813,041; Texas Pipe Line Co. of Texas, $4,563,327.

Buckeye Pipe Line Co. reported it operated 5,350 miles of gathering lines. Eureka Pipe Line Co. reported 4,232 miles and Sinclair Prairie Pipe Line Co., 5,150.

Sinclair Prairie led trunk line mileage with 5,442. Other leaders were: Humble, 4,227; Magnolia, 3,886; Gulf, 3,401; Stanolind, 4,261, and Texas of Texas, 3,591.

The report, covering about 80 per cent of the total oil line mileage subject to federal regulation showed that the 53 companies suffered a 7 per cent drop in net income, the 1935 total standing at $78,249,400.

Current liabilities increased 261 per cent but current assets jumped 34.78 per cent. The companies placed their investment in carrier property at $763,009,274 less than 1 per cent higher than in 1934.

Michigan-Toledo Addition

MUSKEGON, Mich., Oct. 5.—Michigan-Toledo Pipe Line Co. has announced plans to construct a $150,000 addition to its Michigan pipe line system to move Pure Transportation Co. crude from central Michigan to Toledo.

About 12 miles of 6-inch will be laid from the Mount Pleasant, Mich., terminal of the Michigan-Toledo company line to the Pure tank farm in Greendale Township. A new pumping unit will be installed at the Crystal Township, Montcalm County, terminal of the 140-mile main line and a new booster station will be erected on the main line near Lansing, Mich., about 50 miles from the Crystal field.

Within 90 days, or about January 1, Pure Transportation Co. will be able to move crude through the line to Toledo discontinuing boat shipments from its Bay City, Mich., terminal.

The Michigan-Toledo pipe line is owned on a 50-50 basis by Simrall Pipe Line Co. and Standard of Ohio. It was built at a cost of about $1,000,000 last winter.

Not to Sell Confiscated Oil

KILGORE, Tex., Oct. 5.—Richard H. Hill, assistant United States attorney general, said agents of the bureau of internal revenue would not confiscate contraband oil for income taxes.

Recently 543,000 bbls. of East Texas oil assertedly belonging to W. E. Pope, Nueces County, were seized for income taxes.

"Officials of the treasury department were not aware, prior to a conference, that the oil involved was oil on which neither state nor federal tenders would be granted," Hill said.

Future Demand for California Petroleum Products

(Continued from Page 27)

our crude oil consumption as compared with the quantity produced has been:

	Crude oil—barrels daily— Consumption	Production
1931	520,000	516,000
1932	494,000	487,000
1933	484,000	474,000
1934	476,000	481,000
1935	566,000	569,000
First half 1936	600,000	594,000

It will therefore be seen that our consumption followed the same trend as the production. In other words, primarily as a result of the curtailment efforts in 1932, the production averaged 29,000 bbls. a day less than the year previous and the consumption declined 26,000 bbls. a day. Likewise, the tremendous increase in production following the collapse of curtailment in the summer of last year resulted in the production for 1935 averaging 88,000 bbls. a day more than it did in 1934 and the consumption increased 90,000 bbls. a day, although in this case, because of the impossibility of immediately developing markets to dispose of the surplus, it was reflected in additions to gasoline and fuel oil inventories last year.

It is reasonable to assume that, in the main, our Pacific foreign shipments to date have been a part of our economic demand, since we have so far been the logical source of supply, but that our European and Atlantic Seaboard shipments have principally been the result of surplus production. Let us consider, therefore, what our requirements would have been during the last five and one-half years if no Atlantic foreign and intercoastal gasoline and crude shipments had been made, on the theory that these markets were retained solely to dispose of surplus supply. It is recognized that this is a controversial point, but the fact remains that as long as Mid-Continent and certain foreign crudes have a price advantage over California, we cannot, as before stated, after absorbing the higher transportation costs, realize a price for shipments to the Atlantic Seaboard and to European markets that will return our posted price for crude.

Eliminating, therefore, the crude shipments into these markets, which are of little consequence and mainly to Europe, and the crude required to supply the gasoline shipments thereto, which, by the way, has been calculated on the basis of the gasoline yields during each of the respective years, our crude requirements, as compared with our actual production, would have been reduced to:

	Barrels daily— Requirements	Production	Surplus
1931	417,000	516,000	99,000
1932	409,000	487,000	78,000
1933	405,000	474,000	69,000
1934	416,000	481,000	65,000
1935	479,000	569,000	90,000
First half 1936	499,000	594,000	95,000

During this period, because of the surplus crude constantly pressing on the market, cracking operations in California have been at a substantially lower rate than the rest of the United States with the result that gasoline yields from total crude runs to refineries in California have been averaging around 33 per cent whereas east of California the yields have been running around 46 per cent.

If the gasoline yields from crude runs in California had been the same during that period as they were for the rest of the United States and we had made no gasoline or crude shipments to Europe and Atlantic Seaboard markets, our crude requirements, as compared with the actual production, would have been:

	Barrels daily— Requirements	Production	Surplus
1931	319,000	516,000	197,000
1932	307,000	487,000	180,000
1933	307,000	474,000	167,000
1934	311,000	481,000	170,000
1935	356,000	569,000	213,000
First half 1936	390,000	594,000	204,000

Obviously, if this had been the case, sales of both light and heavy fuel oils would have had to be substantially restricted because of the conversion of a larger part of the crude oil into gasoline. In this connection, however, because of the necessity of currently disposing of the crude oil being produced and because of the small quantity of gasoline extracted therefrom, it was necessary to develop markets for proportionately larger volumes of gas and fuel oils. Consequently, substantial quantities of these products were sold during the period at extremely low prices.

It is therefore obvious that a large part of our so-called demand during the last five and one-half years actually represents shipments into markets maintained solely to take care of surplus supply.

Another factor that will have a definite bearing on future crude requirements is the trend towards increased cracking. The development in automotive engines in the last three years has been such that large quantities of cracked gasoline are necessary to produce a motor fuel usable in the newer cars. If this increased cracked gasoline requirement is to be supplied by cracking residuum, then even lesser quantities of refining crude oil will be required.

While California crude oil cannot, generally speaking, be cracked to the point of producing the same percentage of gasoline as, for example, the Mid-Continent crudes, it is safe to say that if market demand and price structure were such as to justify the cost, from 50 to 60 per cent gasoline could be produced from California refining crude with the type of cracking equipment that can be constructed today and still have a usable fuel oil.

If, however, a larger part of our crude production is to be converted into gasoline in the future, then an equivalent quantity of existing fuel oil business will have to look to other sources of supply if our demand for products is kept in balance. In this event, the increased usage of fuel oil for cracking will materially strengthen the price therefor over what it has been during the last five or six years. From the standpoint of the petroleum industry in California, however, this is an encouraging outlook in that it will ultimately result in a higher realization to the producer since it must be recognized that the value of a barrel of crude oil is really the overall realization from its sale in the form of products.

In passing, it might be of interest to point out that during the past five years or so both the Atlantic and Pacific fleets of U. S. Navy have been stationed in Pacific waters. During this time the Navy has been requiring about 7,500,000 bbls. annually of fuel oil. If the procedure were reversed and the major portion of the fleet were transferred to Atlantic waters, our fuel oil demand would be reduced accordingly. With the exception of steamship bunkers, the principal users of fuel oil on the Pacific Coast, however, are the railroads. The figures for 1935 are not yet available, but railroad consumption during the preceding four years was as follows:

	Barrels
1931	23,915,000
1932	17,753,000
1933	16,887,000
1934	19,704,000

With the trend toward diesel equipment, it is apparent that not only because of the increased speed but because of the materially lower fuel and operating costs that this type of equipment will come into more general use. While the petroleum industry will be called upon to supply the diesel fuel, the quantity required will be substantially less than the fuel oil consumed by the locomotives thereby displaced.

The question then is, what will be our future demand, or possibly better yet, what will be our crude requirements? The American Petroleum Institute recently published an exceedingly interesting survey captioned "A Survey of the Present Position of the Petroleum Industry and Its Outlook Toward the Future." That survey, which covers the 25-year period, 1935-1960, was prepared in cooperation with the American Association of Petroleum Geologists and the industry's experts in production, demand, transportation, refining, marketing, taxation and labor, and goes into the subject in exhaustive and elaborate detail. It recognizes the probable increases in consumption resulting from increased population, motor vehicle registration, the expansion of aviation, the greater use of buses and trucks for passenger and freight transportation, the extension of the use of diesel engines, probable improvement in the efficiency of automotive and aviation equipment and the improvement in refining technique towards increasing the available supply of motor fuel by the extension of cracking operations, hydrogenation, polymerization and the substitution of alternative fuels, etc.

From the standpoint of demand, the most outstanding point is that while motor fuel requirements are estimated to increase from 432,000,000 bbls. in 1935 to 657,000,000 bbls. in 1960, as a result of the forecasted steady increase in gasoline yields from crude runs, crude requirements only increase from 919,000,000 bbls. in 1935 to 1,071,000,000 bbls. in 1960, as follows:

	Motor fuel requirements (bbls.)	Gasoline yield from crude (%)	Crude oil requirements (bbls.)
1935	432,000,000	43.8	919,500,000
1940	563,880,000	48.0	1,099,000,000
1945	599,900,000	51.0	1,104,080,000
1950	636,570,000	54.0	1,109,800,000
1955	647,160,000	56.0	1,087,930,000
1960	657,490,000	58.0	1,071,026,000

It is appreciated that the future outlook for the expansion and development of the Pacific Coast is not comparable with the United States as a whole, that we do not have the closely populated areas as in the East, that our farming lands are not as fully developed as in the Middle West, that we do not have the same condition of nonusers of motor fuel as exists in the metropolitan areas of the East and in certain sections of the South. We should consequently be justified in looking forward to a greater increase in motor fuel consumption on the Pacific Coast during the next 25 years than has been forecast for the United States. Assuming, however, that our increase is only at the same rate as forecast for the United States, that we retain only our existing Pacific foreign business of both gasoline and crude oil and that our gasoline yields were increased to the same percentage as set forth in the American Petroleum Institute report under discussion, our future outlook would be:

	Gasoline demand—bbls. daily— Pacific Coast	Pacific foreign shipments	Total	Crude requirements—bbls. daily— To supply gasoline demand	Pacific foreign shipments	Total
1940	184,000	15,000	199,000	348,000	39,000	387,000
1945	196,000	15,000	211,000	346,000	39,000	385,000
1950	207,000	15,000	222,000	345,000	39,000	384,000
1955	211,000	15,000	226,000	338,000	39,000	377,000
1960	214,000	15,000	229,000	332,000	39,000	371,000

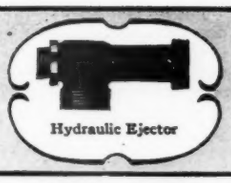
In connection with the foregoing indicated crude requirements, it will be recalled that our crude oil production is now averaging around 580,000 bbls. daily.

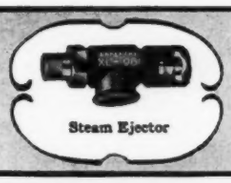
Numerous estimates have been made by qualified petroleum engineers, the California oil umpire's office and the American Petroleum Institute which set the future developed crude oil reserves of California between 2,750,000,000 and 3,500,000,000 bbls. It is recognized that such estimates have to be predicated entirely on known existing fields, sands and structures and, consequently, have to be constantly revised. Using 3,000,000,000 bbls., however, as a basis, our reserves are sufficient to supply the foregoing indicated requirements for about 20 years. If the Pacific foreign shipments were also eliminated, which, of course, could not be done until the current crude oil production was reduced to Pacific Coast requirements, this reserve would be sufficient to supply the Pacific Coast requirements for about 25 years. At the same time, as a result of increasing our gasoline yields from the present 33 per cent to 48 per cent in 1940 and then to 58 per cent by 1960, we would, as before discussed, be required to substantially reduce our fuel oil business. On the other hand, if we continue our present rate of consumption, our reserves, on the basis of 3,000,000,000 bbls., would be depleted in about 15 years, provided of course, the oil could be produced in so short a period.

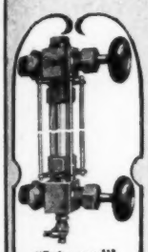
It would, therefore, seem that unless some undiscovered flush fields or deeper sands of large importance are presently developed in California, our question is answered. That the future demand for California petroleum products will be as in the past, our available supply, but that in the future

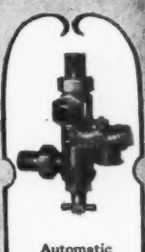
(Continued on Page 34)

PENBERTHY PRODUCTS


Hydraulic Ejector


Steam Ejector

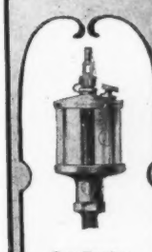

"Safeguard" Automatic Liquid Level Gage

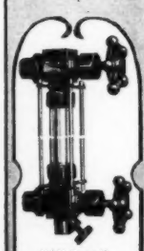

Automatic Injector

"SAFEGUARD" LIQUID LEVEL GAGE

ALL ★ THAT THE NAME IMPLIES

"Navy Type" Liquid Level Gage


Gas Engine Lubricator


"All-Iron" Automatic Liquid Level Gage

Snap Lever Oiler

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Operation of the Penberthy "Safeguard" Liquid Level Gage is automatic and dependable. When the glass is broken loss of liquid is prevented by the immediate and positive closing of ball check valves in both upper and lower bodies. The stop valves may then be safely closed and a new glass inserted.

"Safeguard" and the other types of Penberthy Liquid Level Gages are carried in stock by supply houses everywhere.

Automatic Cellar Drainer (Water or Steam Operated)

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Spring Compression Grease Cup

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PRELIMINARY PROGRAM FOR ANNUAL MEETING OF A.P.I. AT CHICAGO, NOVEMBER 9-12

The preliminary program for the American Petroleum Institute's seventeenth annual meeting in the Stevens Hotel at Chicago, Ill., November 9-12, indicates a wider variety of subjects will be considered.

MONDAY, NOVEMBER 9, 9:30 A. M.

Committee meetings.

2:30 P. M.

Board of directors (Private Dining Room No. 1).

TUESDAY, NOVEMBER 10, 10:30 A. M.

Meeting of board of councilors (North Ball Room). Nomination of candidates for election as members of board of directors.

12:00 Noon

Board of directors (luncheon). (Private Dining Room No. 1).

2:30 P. M.

General session (Grand Ball Room).

Presentation of accident-prevention certificate awards.

Report of board of councilors and election of directors.

Address: President Axtell J. Byles.

Address: Speaker to be announced.

Group Session, 8:00 P. M., Division of Production

General subject: "Materials" (South Ball Room). Sponsored by central committee on drilling and production practice.

Presiding: C. W. Froome, Union Oil Co. of California.

Papers on the following subjects are now under consideration by the program committee, with speakers to be announced later: "Use of Vanadium Steels in Production Equipment"; "Use of Molybdenum Steels in Production Equipment," and "The Relation of Mechanical Testing to Steel Performance."

Group Session, 8:00 P. M., Division of Marketing

General subject: "Automotive Transportation" (North Ball Room).

Presiding: Leo Huff, Pure Oil Co.

"The Truck Tank, a Conveyor of Petroleum Products, and the Developments Which Called It into Use," by C. Wesley Boag, Heil Co.

"Analysis of Truck Design with Special Reference to Tank Trucks," by R. Cass, White Motor Co.

"What Cooperation Can Do for the Trucking Industry," by Ted V. Rodgers, American Trucking Associations, Inc.

WEDNESDAY, NOVEMBER 11, 9:30 A. M.

Board of directors (Private Dining Room No. 1).

Group Session, 10:00 A. M., Division of Production

General subject: "Fundamental Research" (South Ball Room). Sponsored by central committee on drilling and production practice.

Presiding: G. V. D. Marx, Standard Oil Co. of California.

Papers on the following subjects are now under consideration by the program committee, with speakers to be announced later: "Formation Volumes and Energy Characteristics of Gas-Cap Material From Kettleman Hills Field"; "Relationship Between Organic Material in the Sediments and the Presence or Absence of Oil," and "Present Status of Hypothesis of Biogenesis of Petroleum."

Group Session, 10:00 A. M., Division of Refining

General subject: "Refining" (North Ball Room).

"Cracking and Its Economic Significance," by Gustav Egloff, Universal Oil Products Co.

"The Problem of the Rational Utilization of Crude Oil and Its Distillates," by V. N. Ipatieff, Universal Oil Products Co.

"The Stability of Residual Fuels," by A. H. Batchelder, Standard Oil Co. of California.

Group Session, 10:00 A. M., Division of Marketing

Marketing session (Grand Ball Room).

Presiding: George A. Perryman, Socony-Vacuum Oil Co., Inc.

"Trends in Legislation Affecting Marketing," by Willis Crane, National Petroleum Association.

"The 'Iowa Plan' From the Distributor's Viewpoint," by Charles F. Putnam, Putnam Service Co.

"The 'Iowa Plan' From the Retailer's Viewpoint," by W. R. Schuh, National Association of Petroleum Retailers.

Report of division's nominating committee. George A. Perryman, Socony-Vacuum Oil Co., Inc., chairman.

Election of 20 members of the general committee of the division of marketing.

General Session, 2:30 P. M.

General session (Grand Ball Room). Program and speakers to be announced.

7:30 P. M.

Annual dinner (Grand Ball Room).

THURSDAY, NOVEMBER 12

Group Session, 10:00 A. M., Division of Production

General subject: "Drilling Practice" (South Ball Room). Sponsored by the central committee on drilling and production practice.

Presiding: J. T. Hayward, Barnsdall Oil Co.

Papers on the following subjects are now under consideration by the program committee, with speakers to be announced: "Theoretical Determination of Collapse Strength of Casing"; "Testing Structural Silicon-Steel Members for Derricks," and "Bottom-Hole Sampling and Analysis Apparatus."

Report of division's nominating committee. M. E. Brock, Gulf Oil Corp., chairman.

Election of 20 members of the general committee of the division of production.

Group Session, 10:00 A. M., Division of Refining

Automotive topics (North Ball Room).

"Lubrication Requirements of Automotive Gears and Rear Axles," by H. R. Wolf, General Motors Corp. (Discussion by automotive and petroleum technologists.)

"The Newer Bearing Materials and Their Lubrication," by H. C. Mougey, General Motors Corp. (Discussion by automotive and petroleum technologists.)

Report of division's nominating committee. Arthur E. Pew, Jr., Sun Oil Co., chairman.

Election of 20 members of the general committee of the division of refining.

Group Session, 2:00 P. M., Division of Production

General subject: "Production Practice" (South Ball Room). Sponsored by central committee on drilling and production practice.

Presiding: T. V. Moore, Humble Oil & Refining Co.

Papers on the following subjects are now under consideration by the program committee, with speakers to be announced later: "Flow Tests on West Texas Wells"; "Simultaneous Application of Surface and Subsurface Dynamometers"; "Determination of Porosity and Saturation," and "Technique for Procuring and Handling Cores for Saturation Tests."

(Following this group session, the central committee on drilling and production practice will meet in same room.)

Group Session, 2:00 P. M., Division of Refining

General subject. "Refining" (North Ball Room).

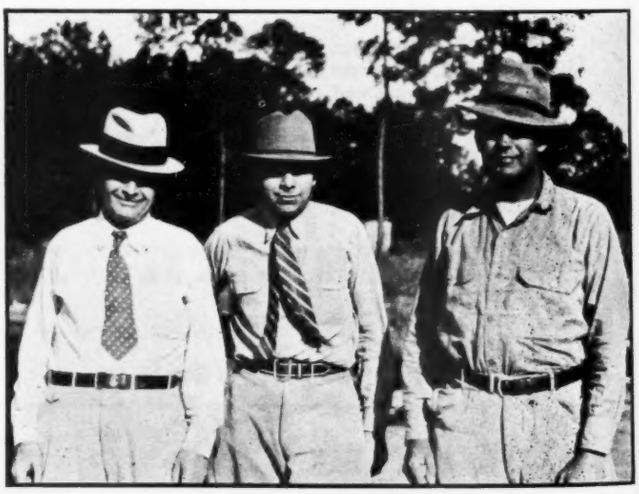
"Fifteen Years of Cooperative Fuel Research," by T. G. Delbridge, Atlantic Refining Co.

"The Chemical Constituents of Lubricating Oil —A.P.I. Research Project 6," by F. D. Rossini, National Bureau of Standards.

"Corrosion of Refinery Equipment," speaker to be announced.

NEW PRESIDENT HOUSTON GEOLOGICAL SOCIETY

Phil H. Martyn, chief geologist of Houston Oil Co., has been elected president of the Houston Geological Society to succeed Merle C. Israelsky, chief paleontologist of the United Gas Co., who has been president the past year. Other officers elected include O. L. Brace, consulting geologist, vice president, succeeding Mr. Martyn in that capacity, and W. C. Thompson, General Crude Oil Co., who succeeds Mr. Brace as secretary-treasurer. In addition an advisory board was elected consisting of Perry Alcott, Humble Oil & Refining Co.; Cliff Bowles, Standard Oil Co. of Kansas, and Lon D. Cartwright, Jr., Sun Oil Co. Mr. Martyn has been associated with Houston Oil Co. for the past 12 years, starting as a district geologist at Beeville. Previously he worked for the Sun Oil Co. in South America and with a mining company in Zacatecas, Mexico. He is a graduate of the Missouri School of Mines.



Left to right: R. R. Hobson, general manager, Houston Oil Co.; Phil H. Martyn, chief geologist, Houston Oil Co., and Donald E. Mathes, geologist, Republic Production Co., Houston, Tex.

KANSAS WATER-FLOODING OPERATIONS

Brundred Oil Corp., of Oil City, Pa., is engaged in work preparatory to water-flooding in Anderson County, Kansas. About 200 productive acres have been acquired from Clyde Layton, about a mile south of Garnett and lying in the Garnett shoestring producing area. Mr. Layton acquired this property from Tidal Oil Co. some time ago. The water input will be commenced about November 15.

The producing shotstring sand underlies this property at an average depth of 800 feet. Only one or two of the old producing wells will be used. The immediate program calls for 18 new wells, nine of which will be input wells. Three rigs are drilling the new wells. Central pumping powers already on the lease used for the old wells will be reconditioned for pumping the new producing wells.

Water will be purchased from the city of Garnett. Since this is filtered purified water, no additional treating will be used. It is believed about 10,000 bbls. per day will be used when the entire project is in operation. About 2,000 bbls. will be used at the beginning of flooding operations. The water pumping plant as originally installed will be capable of handling 3,400 bbls. per day, but the planning has provided for increasing the capacity by installation of additional pumps to the maximum of 10,000 bbls.

SCHOOL LAND RULING

AUSTIN, Tex., Oct. 1.—The legislature cannot by a subsequent resolution amend an act, the third court of civil appeals ruled here in litigation between the state and Humble Oil & Refining Co.

The forty-second legislature by act said that state school land within 5 miles of a producing oil or gas well should not be sold. Later a resolution declared the act did not so intend. The court said the only way to change the act was to amend it by another act. A resolution, the court said, is not subject to a governor's veto while an amending act would be.

Involved was title to 103 acres in Harris County.

TIDE WATER ASSOCIATED TO ACQUIRE TARRABELLA CO.

NEW YORK, Oct. 6.—Acquisition of Tarrabella Investment Co. of California by Tide Water Associated Oil Co. has reached consummation in an application by Tide Water Associated to list 230,000 additional shares of common stock to be exchanged for all the outstanding capital stock of the Tarrabella company. Through acquisition of Terrabella, Tide Water will obtain 2.679 per cent operating interest in the Kettleman North Dome Association, certain interests in oil leases in Fresno and King Counties, California, and royalty holdings in the Kettleman Hills district. The 2.679 per cent interest in the Kettleman North Dome Association is estimated to represent 6,300,000 bbls. of recoverable oil. The Tarrabella Co. is authorized to engage in the oil business, either directly or through subsidiaries and to hold stocks and securities in other corporations.

In applying for registration of the additional common shares, Tide Water disclosed that it had purchased 21,554 shares of capital stock of South Penn Oil Co., for $754,040 in cash in addition to the 172,743 shares purchased from the General Education Board.

EFFECT OF FRENCH DEVALUATION

NEW YORK, Oct. 5.—Devaluation of the French franc by approximately 30 per cent failed to produce any material change in this country's oil export business. Although two cargoes of gasoline were purchased by French interests two weeks ago on the Gulf Coast for October and November lifting and the buyers may have benefitted by their foresight, little advantage to this country's petroleum suppliers is expected to result over a long term.

All export prices are quoted and determined on the basis of American dollars and cents meaning that the devalued franc will now purchase 30 per cent less petroleum in American ports. Where 100 francs previously purchased approximately $6.50 worth of American oil products the devaluation movement caused French buyers to pay approximately 130 francs.

Providing competitive supplying countries maintain their currency at present standards there likely will be little shift in French petroleum imports. Rumania is about the only country outside of the five chief suppliers in position to offer serious competition and it has shown inclination in the past two weeks to elevate its prices.

Sir Henri Deterding, director general of the Royal Dutch Petroleum Co., said he approved devaluation because it would enable the Netherlands to compete in world markets.

THOMAS APPROVES COMPACT

If the oil industry will keep its house in order there is no need to fear federal control, Senator Elmer Thomas of Oklahoma told representatives of oil states and oil companies at a luncheon in Oklahoma City.

Many of the oil measures before congress during the past years has been "threat" legislation, he said, explaining that each of the bills carried a warning that unless the industry remedied its own problems, the federal government would be forced to set up regulations.

"I believe the Interstate Oil Compact has been a real benefit to the oil industry," he said. "If the work is continued and if the states can continue to do their own policing and handle the job, there will be no further messing up through a threat of federal control. That, I believe, is the sentiment of a majority of gentlemen in congress."

ATLANTIC OIL PRODUCING CO.

Atlantic Oil Producing Co. has ceased to do business, and commencing October 1 all business transacted or conducted by Atlantic Oil Producing Co. will be transacted or conducted by Atlantic Refining Co.

THE MARKETS*

CRUDE OIL: *Posted crude schedules unchanged. Increased production of Texas in face of seasonal decline in gasoline demand may result in surplus crude being available at Gulf Coast points before end of month. Large crude buyers in Oklahoma state no market outlets for 50,000 bbls. extra output which has been petitioned for with hearing to be held October 16.*

REFINERY: *Most important price advance was 5-cent per barrel increase in Bunker C fuel oil prices at bunkering points along East Coast and Gulf Coast. Drastic reductions made in Mid-Continent neutrals following long period of price cutting. Pennsylvania and Western bright and steam refined stock prices lower. Gasoline firm except for low octane material. Mid-Continent kerosene and light fuels generally higher.*

TANK-WAGON AND SERVICE STATION: *No general changes in gasoline prices. Tank-wagon prices on furnace oils and industrial oils advanced at Chicago, Philadelphia and other points.*

FINANCIAL: *Upward movement common stock equities continues. High of 30 representative stocks for week ending October 3, 35.52; low, 33.82; close, 35.30. Week ending September 26: High, 35.01; low, 33.51; close, 34.22. Highest close for any week in 1936, April 4, 37.55.*

**Detailed information in Market Section.*

KINGSBURY HOME FROM EUROPE

K. R. Kingsbury, president of Standard Oil Co. of California, returned to the United States October 1 and left almost immediately for San Francisco. Excepting for the return home, Mr. Kingsbury was accompanied by Capt. T. Reiber, chairman of Texas Corp. and James A. Moffett, chairman of the newly formed California-Texas Oil Co., Ltd. Mr. Reiber and Mr. Moffett probably will sail before the middle of the month.

The trip was largely for carrying out physical consolidation of foreign supply and marketing facilities consolidated under California-Texas Oil Co.

—Fratures, Inc., N. Y.

K. R. KINGSBURY

PAPERS OF INTEREST TO OIL MEN

Recognizing oil companies have a large investment in the operation of water systems connected with various branches of the industry, the southwest section on the American Water Works Association believes certain subjects to be discussed at the annual convention at the Goldman Hotel, Fort Smith, Ark., October 12-15, will prove of interest to engineers and others who can attend. The importance of problems connected with water disposal and water flooding by oil companies directs attention to points with which water men and oil men are concerned in common.

One step toward cooperation has been taken, by arrangements made to have a paper on water conditioning delivered by Ralph E. Damp of Carter Oil Co.

WATER-FLOOD NEAR FRANKLIN, PA.

In the Venango-Clarion field of western Pennsylvania two Bradford operators are engaged in preliminary work 2 miles west of Franklin preparatory to water-flooding and repressuring. Sloan and Zook have acquired property which they will operate by the water-flooding method. One-half mile from this property O. H. Culbertson is preparing to produce a lease by the air or gas drive method. These two projects may furnish tests of the comparative value of water-flooding and gas drive in this type of field.

The equipment and wells are being reconditioned, and the second wells are being drilled on each property. A thick sand section is present, probably averaging about 60 feet. The saturation is rather low. This is the main reason for the favoritism previously given to repressuring in this area over water-flooding. The lack of uniformity in the sand section also contributes to this viewpoint. Due to the characteristics of the Bradford sand, the secondary recovery carried on in the Bradford field is all water-flooding, while practically all of the secondary recovery operations in the other fields of western Pennsylvania are of the gas-air drive, or repressuring type.

I.P.A.A. PROGRAM

President Charles F. Roeser, of the Independent Petroleum Association of America, thinks that a restricted drilling plan would force producers to a more drastic program of conservation, wells would be repressed, gas would be conserved and the oil would move to market in a steady stream.

He would not curb wildcatters, but encourage them. "But once a new pool has been found, it should be drilled upon a sane basis. The number of wells should be restricted to actual needs. Thus you have a new field, prove your reserve at a minimum cost and keep there a reserve handy for the time that you need it."

Vice President H. B. Fell reports the program for the annual meeting at Oklahoma City, November 30, has been referred to a subcommittee which will consider the subject.

TO STUDY SIMPSON FORMATION

The Oklahoma City Geological Society announces a series of five field trips to study the Simpson formation in the Arbuckle Mountains. One trip will be made to outcrops near the Wichita Mountains and another to outcrops of beds classified as Ordivician in the Ouachita Mountains. Dr. Charles E. Decker will be the leader.

The trips will occur at monthly intervals, the first on October 16-17. The program includes a round table discussion beginning at 7:30 p.m. in the Artesia Hotel at Sulphur, October 16. The field trip will leave the hotel at 7:30 a.m. October 17.

TEXAS PRORATION HEARING

AUSTIN, Tex., Oct. 5.—The Railroad Commission has called a general proration hearing for October 14 preliminary to issuing an order fixing allowables for November.

Larger Area of Exploration for Oil Expected in Panhandle

(Continued from Page 25)

time this factor is 1.27 and a well must have a potential of at least 60 bbls. per day to receive more than 20 bbls. marginal allowable. This is because 1.27 per cent of 40 bbls., the difference between the 60-bbl. potential and the 20-bbl. marginal allowable, is .508 bbls. or slightly more than one-half a barrel. In all instances where the decimal part of the barrel secured by multiplying by 1.27 is more than one-half barrel the full barrel is added to the well's allowable.

In arriving at well potential it is optional with the operators to accept the 12½ per cent decline or again test the well by 24-hour open flow. Open flow may mean securing all the oil possible by pumping but in effect it is getting all the oil out of the well it will make in a 24-hour period. It has been found wells producing from the dolomite have a very normal decline curve and wells producing from the granite wash decline much more rapidly. There is therefore little advantage to be gained by a second 24-hour potential test unless the well has been acidized or shot since the last test was made. Acidizing of the dolomite has not given any great increase in rate of production. Some increase has been noted after wells have been properly shot. However, some operators claim oil accumulates at the well during the production period following a potential test when only a limited quantity has been withdrawn each day and will effect the well's capacity when it is again tested, and have proven their contention in face of the known fact that both dolomite and granite wash wells grow smaller the longer produced.

TABLE 1

County—	No. wells	No. marginal wells	Potential	Marginal oil	Exempt oil	Proratable oil	Allowable
Carson	306	129	43,256	4,868	28	38,107	5,476
Gray	1,442	361	328,563	25,234	726	301,286	30,058
Hutchinson	483	366	138,733	12,876	996	124,849	15,563
Wheeler	301	57	263,269	4,908	17	240,134	8,388
Totals	2,892	913	773,821	47,886	1,767	704,376	59,485

Percentage of proratable oil allowed 1.27 per cent.

When the potential has been established for a well it is not necessary to actually test it again until it has declined to a point where it can no longer make its daily allowable. This rule makes the test periods for each well different but when a well does not produce its allowed quantity of oil during any month and there is no good reason for its failure to deliver the oil it becomes necessary either to rate the well in accordance with its actual rate of production or test it again. This practice has led to many wells being carried in the field potential figures at a much higher rate than they are capable of making.

Wells in this district secure the production at about 3,000 feet below the surface and cost from $18,000 to $20,000 each to drill and complete. As new wells do not come in producing much more than old offsets the new wells are not justified excepting as lease production falls off to less than allowable. It requires about 35 days to complete a well in this district and many holes are drilled all the way with cable tools while others are rotated to the top of the pay and then drilled in with cable tools.

Future Demand for California Petroleum Products

(Continued from Page 30)

it will not include the disposition of a surplus over and above our economic markets.

Therefore, if present estimates of California reserves closely approximate the ultimate recovery, then we will within a very few years see the entire elimination of shipments to Europe and the Atlantic Seaboard and will also see a material reduction, if not an entire elimination of shipments to Pacific foreign markets. This should not be viewed, however, with alarm but as an optimistic outlook for the California producer and, in turn, the people of the state by reason of the greater revenue that will be possible from the utilization of California's most important natural resource.

As to supply our own requirements, there should be no fear as to a shortage, for as before mentioned, the present-day refinery methods are such that, if necessary, a considerably larger portion of our crude supply can be converted into motor fuel, which is the most important product. Furthermore, it is generally accepted that future improvements in refinery engineering will, if required, provide an even larger recovery than is now possible.

Possible shortage of petroleum in California, however, is not a new story. Quoting from a booklet published in 1928 by Chamber of Mines and Oil, the forerunner of the present California Oil and Gas Association, "The year 1900 was of further importance because it headed a seven-year period of overproduction. . . . By 1906, when the state's output had climbed to over 32,000,000 bbls., oil was generally adopted as a locomotive fuel. This not only brought relief but soon caused consumption to overtake and exceed production. The shortage, however, was ended in 1909, when the state production increased to 58,000,000 bbls. . . . The Coyote and Whittier fields became heavy producers in 1912, and in 1914 the total state production reached the record figure of nearly 104,000,000 bbls. Immediately thereafter, production showed a sharp decline and it was not until six years later that the record of 1914 was again equalled. In the meantime reserve stocks of crude oil were drawn upon steadily, so that when the United States entered the world war in 1917 the increased demand for petroleum threatened to create a shortage in California. . . . Some relief was effected by the discovery and development of the Montebello field in 1917, and by heavy production in the Richfield and Elk Hills fields in 1919. Production continued to lag, however, until 1920, when Montebello, Elk Hills, and Richfield added 21,000,000 bbls. to the state's output. By this time reserve stocks of crude had been reduced to 22,000,000 bbls. . . ."

We were so alarmed because of the 1920 shortage of crude oil that train loads of gasoline were shipped into this territory from Texas and cargoes of crude naphtha were imported from Mexico. This was all changed by discovery of new fields, such as Santa Fe Springs in 1923, which produced in that year alone 80,000,000 bbls. of crude oil as compared with a total of 104,000,000 bbls. for the entire state in 1920.

A graphical picture of the foregoing is set forth in the chart appended hereto. This chart illustrates since 1914 the close relationship between production and indicated demand, the fluctuation in total stocks and in the price structures for crude oil, gasoline and fuel oil, and the effect that shortage and surplus of supply have had on the price structure.

Future of the Oil Supply in California Fields

(Continued from Page 24)

irregular intervals. Since 1923 these estimates have been increasing at approximately the same ratio as cumulative production. Whether the sameness of these increasing ratios is accidental or has been used as a safety factor is controversial. However, withdrawals from proven reserves have been greater than the amount added by the discovery of new fields during the last seven years.

Using 8,000,000,000 bbls. for California's estimated ultimate production as a basis, a decline of estimated future reserves for the last 14 years has been calculated and plotted on the accompanying graph. In 1933, note that the two curves cumulative production and estimated future cross which means total past production and estimated future were approximately equal during the period 1932-1933.

Extension of the average trend of these curves has been done to illustrate what the picture ahead looks like without making any allowance for new supply.

CONCLUSION

To keep California supply and demand in balance it is of vital importance that reserves be increased approximately 2,000,000,000 bbls. to approach an ultimate reserve of 10,000,000,000 bbls. This increase should come during the next five-year period. Where are the additional reserves going to come from?

The known oil provinces of California, namely, Coastal area, San Joaquin Valley and Los Angeles Basin, where these future reserves are most likely to be found, more than probably will not be enlarged.

Approximately all of California's future supply will come from some combination of the following:

1. Discovery of deeper sand in known proved fields.
2. Redrilling of wells in old fields.
3. Drilling of deep tests in numerous plays, which have already been tested to depths of 5,000 feet or less, to depths of 10,000 to 12,000 feet.
4. Buried structures which will be found by geophysics.

TABLE 3—COMPARISON OF ESTIMATES OF CALIFORNIA OIL RESERVES, ANNUAL PRODUCTION AND CUMULATIVE PRODUCTION

Date of estimate	Estimate by	Estimates ultimate production proved oil land	Annual production	Cumulative production
1908	U.S.G.S., Day, Arnold	5,000,000,000	48,307,000	250,495,000
1909			58,192,000	308,687,000
1910			77,698,000	386,385,000
1911			83,744,000	470,129,000
1912	Requa, M. L., Bell, A.F.L.	4,225,000,000	90,074,000	560,203,000
1913			97,867,000	658,070,000
1914			103,624,000	761,694,000
1915	Arnold Ralph	3,041,274,000	89,567,000	851,261,000
1916	U.S.G.S., U.S.B.M., Sen. Doc. No. 310	3,223,365,000	91,822,000	943,083,000
1917	Bureau of Mines, Beal, C. H.	3,300,000,000	97,268,000	1,040,351,000
1918	White, David	3,364,000,000	101,638,000	1,141,989,000
1919			101,222,000	1,243,211,000
1920			105,721,000	1,348,932,000
7-1-21	Cal. Com. A.A.P.G.	(3,095,000,000	114,850,000	1,463,782,000
	U.S.G.S.	(3,314,000,000		
1922			139,627,000	1,603,409,000
7-1-23	Collom, R. E., and Barnes, R. M.	3,544,000,000	263,729,000	1,867,138,000
1924			230,063,000	2,097,201,000
1925			230,147,000	2,327,348,000
1926	Heller, A. H.	4,307,064,000	224,117,000	2,551,465,000
1927			230,751,000	2,782,216,000
1928		*5,414,000,000	231,783,000	3,014,199,000
1929			292,073,000	3,306,236,000
1930			228,100,000	3,534,336,000
1931			188,829,000	3,723,165,000
1932			178,128,000	3,901,293,000
1933			173,083,000	4,074,376,000
7-1-34	Stockman, L. P.	(5,448,700,000	175,678,000	4,250,054,000
	Collom, R. E.	(7,466,400,000		
1935	A.A.P.G. Comm.	(7,958,000,000	207,900,000	4,457,954,000
	Wilhelm, V. H.	(7,182,000,000		
7-1-36			**216,000,000	**4,673,000,000

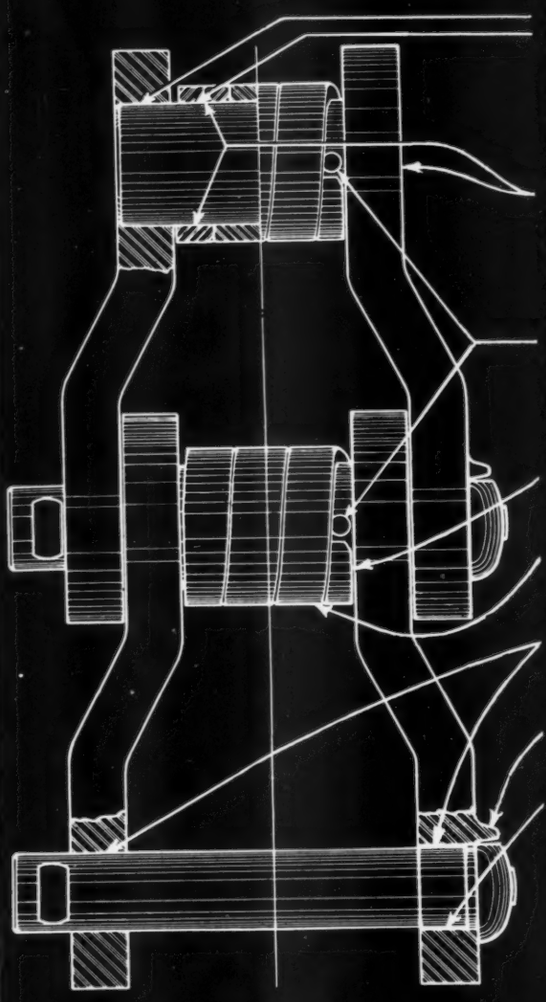
*Kettleman Hills, Santa Fe Springs, Buckbee and Nordstrom Zones, Elwood (Vaquerous Zone). **Estimates.

IDEAL

"Reg. U. S. Pat. Off."

SPIRALOY ROTARY CHAIN

TYPE F



Precision ground bushing tightly pressed into accurately broached holes in side bar insuring true alignment.

Bushing is full diameter throughout its length giving it full strength.

Very smooth finish of bushing both inside and outside provides good bearing surfaces for pin and roller.

Large uncovered oil holes permit unrestricted flow of the lubricating oil to the pin and inside of the bushing.

Seamless spiral roller is resilient and shock-absorbing.

Sprocket tooth contacts roller on ground surface.

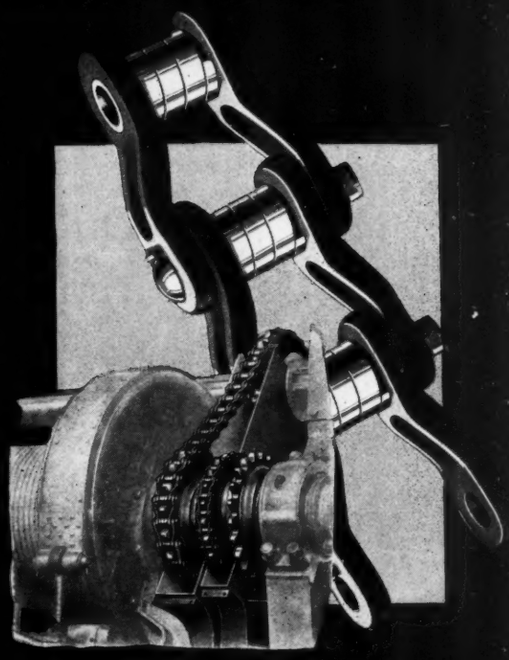
Accurately ground pin pressed in broached holes of side bar.

Pin head lock lug is an integral part of the side bar.

Pin is released when the slightly enlarged section is driven out of side bar.

. . . . carefully engineered to obtain maximum strength and wear resisting qualities. Its design and the materials used in its construction were developed from extensive field tests and experiments.

Manufactured in A. P. I. No. 3 and A. P. I. No. 4 sizes.



Type F Spiraloy Chain installed on Ideal No. 34-9-SOU Draw Works

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How do you know?

Every refiner knows that Dubbscracking is the way to make good gasoline

How do they know?

The Dubbs refiner knows because he has to run his Dubbscracking units for all they are worth trying to keep his trade supplied with Dubbscracked gasoline

The skimming plant refiner knows because he has to run his sales department for all it's worth trying to keep his trade—

How do you know?

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
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Oil News from Foreign Lands

Eastern Venezuelan Wildcats

Drilling has been resumed on Venezuela Gulf Oil Co. No. 1 El Tigre, important eastern Venezuela wildcat test which had been shut down for several weeks due to tropical rains and inability of operators to deliver fuel to the drill site. The test was last reported proceeding in gray shale at 5,364 feet. It is east of the Oficiana district. Rumors current in New York last week that production had been indicated in Standard Oil Co. of Venezuela No. 1 El Salto at about 5,219 feet could not be confirmed at the company's operating offices. The last report officially released was that a fishing job had delayed drilling at that depth.

VENEZUELA

Venezuela Gulf No. 1 Santa Ana, in eastern Venezuela, is attempting to correct parted casing with depth unchanged at 5,981 feet.

Near East (Qatar)

The western shore line of the Persian Gulf, embracing the coast line of Saudi Arabia, has become one of the most popular prospecting territories available to foreign oil operating concerns. On the heels of California-Texas Oil Co. discovery of production on the Dammam structure, northwest of Bahrein Island pool, several new concessions have been announced. In some instances, the concessions now virtually solid along the eastern coast line of Saudi Arabia, so far as it is linked with the Persian Gulf, were either granted or in preliminary stages of consummation before Dammam structure production was proven. The latest concession reported extends over the Peninsula of Qatar, south and southeast of Bahrein Island. To operate the concession, Petroleum Development (Qatar), Ltd., a private company with capitalization of $500,000 has been organized. It is also reported several interests are directing attention to the Oman and Yemen districts, directly south and west from Qisham Island where Anglo-Iranian Oil Co., Ltd., is drilling a wildcat.

SAUDI ARABIA

Creation of the new subsidiary by Anglo Iranian is linked with proposed exploration and development of the Petroleum Concessions, Ltd., concession over the Hedjas and down to the Farsan Islands, covering approximately 60,000 square miles. Sheik Ibn Sa'ud is reported looking for a concessionnaire to explore the interior of Arabia.

On the eastern side of the Persian Gulf, the Iraq government is apparently preparing to take a hand in petroleum operations. When a year's contract expires on a refinery at Qaiyara, the Iraq government has indicated it intends to take charge of the property. The plant was constructed by German interests 20 years ago, but has been modernized. The plant at Qaiyara is now being operated under contract by the B. O. D. company, but will revert to government disposition at the end of a year. Belief that the Iraq government intends to take an active part in the petroleum industry is based partially on recent organization of a company headed by nationalists of that country. The newly formed company is Iraq Corp., Ltd., with Daoud Pasha al-Haidari and Hindi Zade Rustem Fehmi Nedjo Bey as directors.

During July, Iraq's production amounted to approximately 2,434,796 bbls., compared to 2,467,486 bbls. in June.

Delivery of equipment for testing is awaited at California Arabian Standard Oil Co. (California-Texas Oil Co., Ltd.) No. 1 Damman, which has been plugged back to test the horizon yielding flush production of 4,000 bbls. of 53 gravity in No. 2 Dammam. The productive horizon was found at approximately 2,150 feet in No. 2 Dammam. No. 1 Dammam was originally drilled to 3,200 feet, but orders to plug back for a test of an upper zone were issued after No. 2 discovery was completed. California Arabian Standard is in process of drilling three additional tests. The company's No. 3 Dammam, between No. 1 and No. 2, on the Saudi Arabian mainland, just west of Bahrein Island, is preparing to test at 2,190 feet. Showings of oil have been encountered, but the productive ability awaits a test which probably will be made in a few days. The company's No. 4 Dammam is drilling at 572 feet and No. 5 Dammam at 53 feet.

About 45 miles north and slightly west of the Dammam structure, California Arabian Standard No. 1 El'Alat is awaiting completion of a water well. Drilling on the wildcat exploratory test, on a mapped structure similar to the Jebel Dammam feature, will be started as soon as water supply is developed.

Another twistoff at 3,125 feet continues to delay Kowait Oil Co., Ltd., No. 1 Bahrah, wildcat test on the northwest corner of the Persian Gulf. A previous twistoff at 2,822 feet caused a fishing job which was followed by the present delay. At 3,125 feet, the wildcat test is still in Eocene lime.

Japan Needs Tankers

Insufficiency of Japan's merchant oil tanker fleet is shown in the current Bureau of Mines report on International Petroleum Trade. In an effort to correct the deficiency, the Japanese ministers of marine and industry are combining their efforts to encourage the construction of new oil tankers. Japan now has 23 oil tankers capable of transporting only about 2,000,000 tons of petroleum per year. Japan's petroleum imports have increased to more than 3,500,000 tons annually, leaving nearly half of the country's national requirements dependent on ships controlled by other nations. In contrast to Japan's total of oil tankers the United States has 385, Great Britain 369 and Norway 213.

JAPAN

Site for Dublin Refinery

Site for the new refinery planned by the Irish National Refinery Co., Ltd., on the North Wall, Alexandra Extension, Dublin, Ireland, is now being reclaimed, graded and is scheduled to be ready for construction work in a year. The Irish National Refinery Co., headed by T. C. J. Burgess, has engaged a site totaling 70 acres, 17 of which must be reclaimed by the Dublin Port & Dock Board. A group of 150 men are now engaged in the reclamation work.

IRISH FREE STATE

Plans call for completion of the site work and refinery construction program in a total of 18 months, although the latter is dependent on the former. The Irish National Co. is reported planning a refinery of 10,000 bbls. per day capacity and the total cost may exceed $5,000,000, if the full program is carried out as now tentatively outlined.

The Irish National Co. now has a nominal capital of 2,000,000 pounds. It is also reported that an affiliate company, Liffy Trading Co., has been formed with capital of 2,000,000 pounds.

Mr. Burgess is chairman of the London and Thames Haven Oil Wharves, Ltd., London, and chairman of the Parent Petroleum Interests, Ltd. Expansion of the Burgess interests to practical domination of the Irish market strengthens its position as a formidable factor in the British Isles petroleum industry.

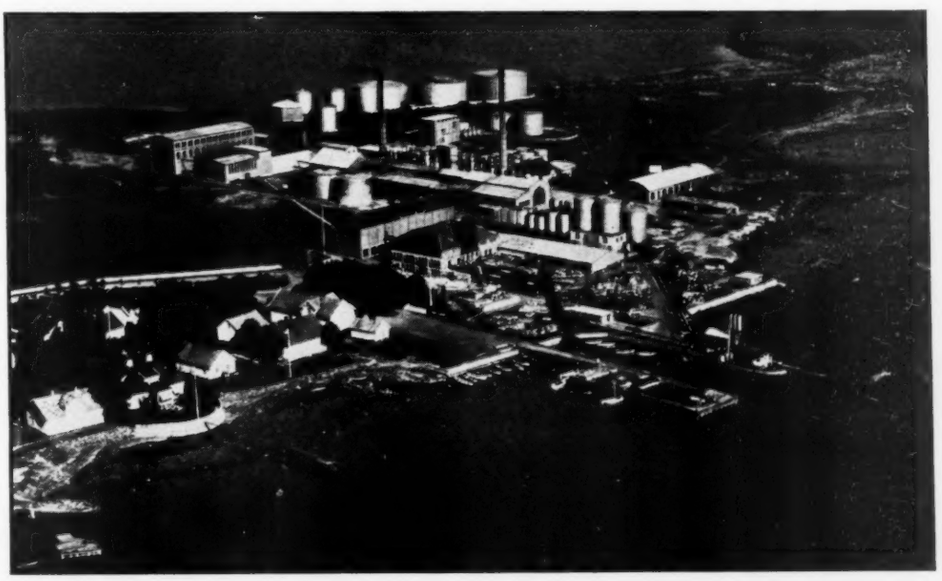
Solvent Plant in Russia

American refinery equipment manufacturers will participate in Russia's first commercial solvent refining plant to the extent of approximately $1,000,000. The Duo-Sol solvent refining process will be employed in the Russian full range plant at Grozny under license. The plant will have crude oil charging capacity of 2,500 bbls. daily. Included in the new refinery, construction on which will start shortly, will be a Barisol de-waxing plant and a contact filtration plant similar in design to one built several years ago in Russia.

U.S.S.R.

Part of the equipment has been purchased by Max B. Miller & Co. of New York which has the contract for designing and constructing essential parts of the refinery. Amtorg Trading Co., representing the Soviet oil industry in this country, is purchasing equipment for the contact filtration direct from suppliers for shipment to Russia.

The solvent plant to be constructed at Gronzy will be the first commercial use of this refining method in Russia although several small SO_2 systems have been used in the past for production of small volumes of transformer oil and other products.



Vallo plant of Ostlandske Petroleum Compagni (Standard of New Jersey subsidiary) in Norway differs from conventional type in nearly all operations being carried on inside buildings

the OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

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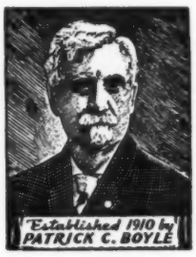

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Keep on the Concrete

The meeting of the Interstate Compact Commission at Oklahoma City again demonstrated that the work of the commission is appreciated and that the industry is solidly approving its continuation when the present act expires next year.

In any organization so young and confronted with so many practical problems it is inevitable that there should be differences of opinion in regard to details of its work. The developments at the Oklahoma City meeting indicate that the representatives of the compacting states are resolved to work out these problems of administration without endangering the compact agreement with its demonstrated contribution to the stability of the oil business.

As Colonel Thompson said, the compact is the democratic and constitutional method for adjusting these matters. The alternative is complete demoralization of the industry in which all would suffer and at the same time throw the door wide open for renewed agitation for federal control.

There is unquestionable merit in the Texas contention that the method used by the Bureau of Mines in arriving at its estimate of requirements needs revision in part. The bureau is the logical agency to compute the national demand for crude but changing conditions in the industry may necessitate revision of the methods of determining future crude requirements as has been the case within the industry itself forcing it to revise its mode of calculation.

Available information shows that the industry has consistently produced crude in excess of the bureau estimates of requirements and that despite that fact it has used all the crude produced and substantial withdrawals from storage have been necessary to supply the demand.

Aside from determining what the demand is there is the question of equitable distribution of this demand when determined. There has been some complaint that states, not members of the compact, have paid no attention to the bureau recommendations and have taken markets away from other states to provide outlets for their greatly increased production.

The bureau estimates have accepted this situation and have given these markets to these overproducing states in subsequent recommendations. Naturally, no state is going to sit idly by and see its normal markets taken from it. The potential seriousness of this situation is readily apparent.

Certain sacrifices will have to be made as they have been made in the past but good sense will recognize the necessity of keeping on the concrete rather than plunging off into the ditch.

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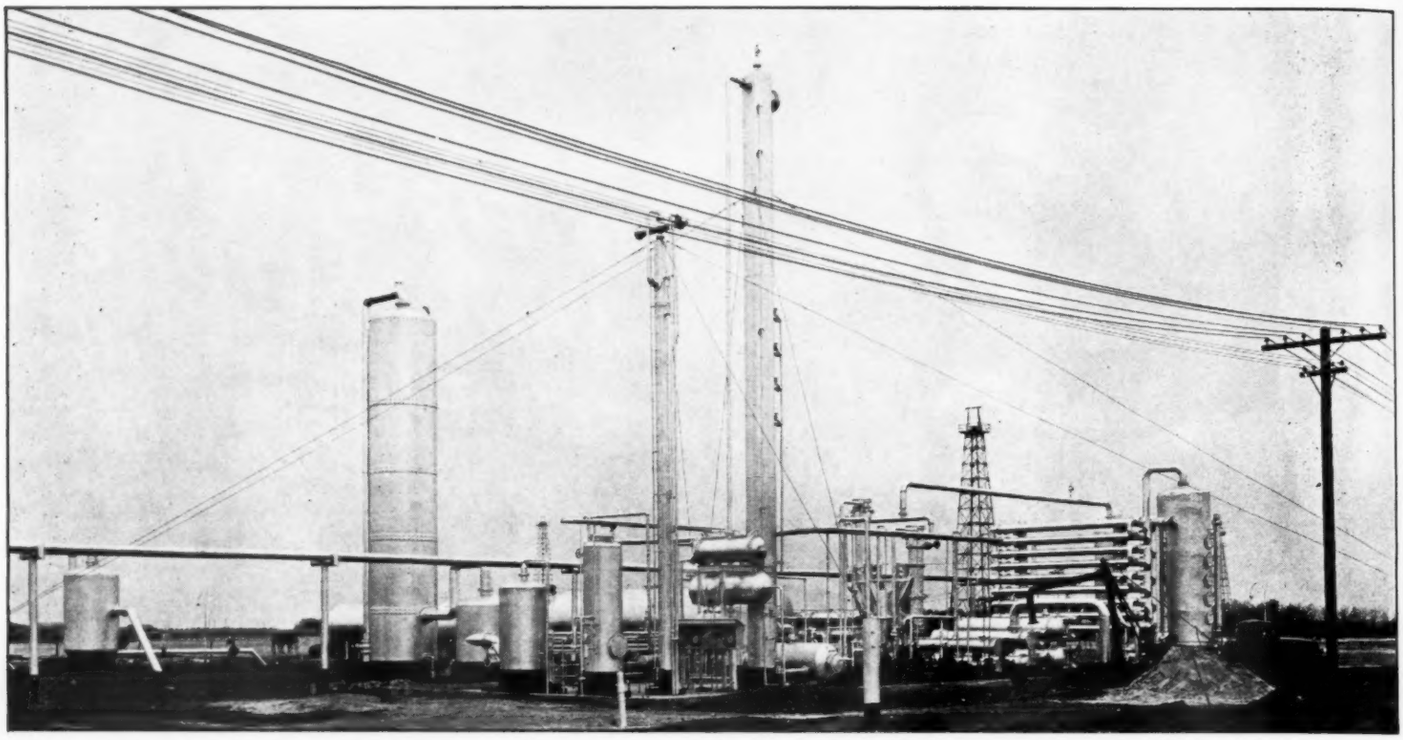


General view of Natural Gasoline Corp. new 30,000-gallon plant located near Galva, Kans. Although operating, facilities are being added. When all construction work is completed, much of the above equipment will be placed under roof

Add Ten Compressors in New Kansas Well-Pressure Plant

By W. T. ZIEGENHAIN

After operating its new 30,000-gallon natural gasoline plant at Galva, Kans., for two months as a well-pressure unit, the Natural Gasoline Corp., a subsidiary of the Warren Petroleum Co., is just placing in operation four new 300-horsepower Worthington compressors, and within another month, six more such units will be added. Five of the ten compressors will be used to augment the natural field pressure in processing the gas through the plant and four of them will boost the residue gas for delivery into a dry gas pipe line system.

Each of the 10 new units will include eight power cylinders and four compressor cylinders and in the case of the tenth unit, three of its compressor cylinders will operate on low pressure, and the fourth cylinder will operate as a recompressor taking gases off the process tanks.

The location of the new plant is more definitely given as 1½ miles northeast of Galva, Kans., on the Giffin lease, McPherson County in NE SW section 14-19s-2w. Connections have been made to 30 wells in the local field, some of these wells exerting a gas pressure above the 40 pounds pressure carried on the traps while a few have declined to a pressure near this level. As the natural pressure of the field declines and as the compressors on the residue gas are placed in operation, the company plans to reduce the trap pressures on all wells and the result will be that additional rich gas will be brought into the plant.

At present, operating as a well pressure unit, the plant is processing about 11,000,000 feet of gas per day and about 3,000,000 feet of residue gas goes into the field gathering lines. Gasoline production is substantially below the capacity of the plant but upon completing the installation of all compressors the daily production will be brought up to the full capacity of the distillation and fractionating equipment.

Some influence will be felt also, as the wells now located in the Galva field and which are producing from a lime formation are perforated to take gas from a higher chat formation in accordance with plans formulated by the producers.

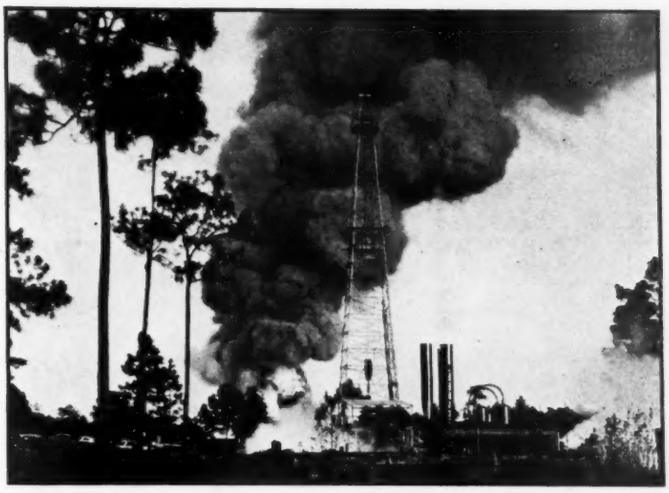
In view of the growing supply of rich gas and the desire to provide maximum flexibility in the operation of the plant under changing field and market conditions, the company has installed an exceptionally efficient fractionating tower as part of the distillation unit and has also installed an auxiliary tower which permits the fractionation of propane and butane to commercial standards for delivery in tankcars. At present the plant is producing 14-pound natural but is equipped to produce any recognized grade.

Electric power generating plant

Another feature of the new plant is its power generating unit and the use of electricity to accomplish all pumping. The power plant includes three 165-horsepower engines driving 125 k.w. generators, bringing the output of the plant to 375 k.w. This provides power for all processing work, the only steam used being that provided for carrying out the distillation of the gasoline from the absorption oil. Even the loading of tankcars is accomplished by the use of electrically driven centrifugal pumps.

Except for the features mentioned above, the plant is equipped to operate as a conventional absorption type unit. It utilizes mineral seal oil as the absorption medium and approximately 400 gallons of this oil is circulated per minute.

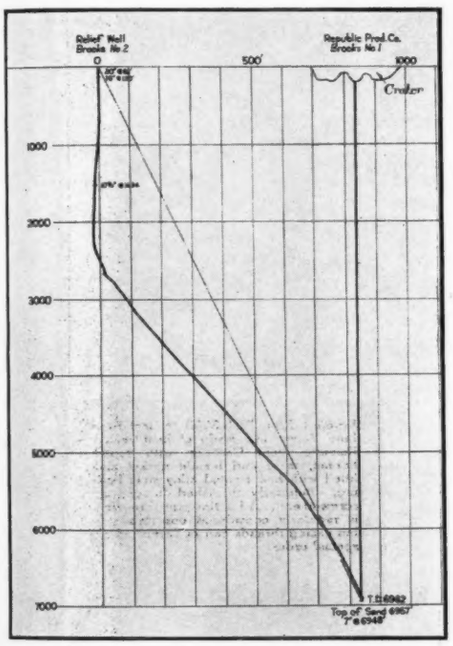
Cratering Well Is Killed by Drilling Offset



By NEIL WILLIAMS

Republic Production Co. and Houston Oil Co. No. 1 Brooks, wildcat producer 9 miles north of Silsbee, Hardin County, which blew out August 5 and cratered and caught fire, was killed the past week when water pumped into the sand through a relief well flooded the sand and choked off the flow of oil and gas. Five hundred sacks of cement pumped into the sand after the water killed the well completed the job and made certain the well would remain dead.

The well ceased its rampage at 1:10 o'clock



Vertical projection of relief well drilled to kill Republic Production Co. and Houston Oil Co. No. 1 Brooks, wildcat crater well, north of Silsbee, Hardin County, Texas Gulf Coast

a.m., October 2, 18 hours and 10 minutes after pumping water into the sand through the relief well began. Pumping was started at 7 a.m. October 1 with a Halliburton cement truck breaking circulation at 2,000 pounds pressure. Within four minutes the pressure dropped to between 1,500 and 1,800 pounds indicating the sand was taking the water. The pumps were run for three hours circulating between 120 and 135 bbls. of water per hour. These pumps then were cut out and for the next eight hours the two regular mud hogs carried on, pumping approximately 250 bbls. of water per hour. Then the truck pumps again were put in operation, and completed the job. Approximately 6,000 bbls. of water were pumped altogether.

Up until about three or four hours before the well was killed it looked as though the undertaking was doomed to failure. A second pump truck was ordered to increase the volume of water handled, but at 11 o'clock the flames began to flicker and the well to show signs of dying, and at 1:10 a.m., before the second truck could be connected, the well was out. Circulating of water was continued until 2 a.m., when the cement slurry was started in the hole. By 3:15 a.m. all 500 sacks of cement were down. The pumps then were cut out and the two regular mud hogs connected up to hold the pressure on the formation. When the pumps were shut down, a short time later, no pressure was recorded on the well, indicating the cement had been forced into the sand, effecting a seal.

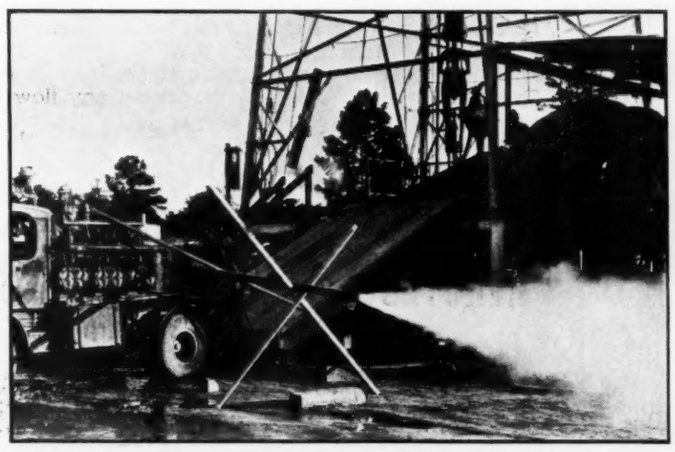
Although similar methods have been followed in killing of two other cratered wild wells on the Gulf Coast, and on another in Rumania, the Silsbee undertaking was considered the most difficult, involving several problems not faced in other jobs. Greater depth of the producing sand, which increased the chances of error in calculations; extremely broken formations, which interfered with keeping the relief well in its course, and higher pressures, contributed to the hazards.

Depth of the crater well is 6,982 feet with top of sand at 6,957 feet, and with 7-inch casing at 6,948 feet. Bottom of relief well, drilled from a surface location 836 feet north, 70 degrees 17 minutes west, is at a measured depth of 7,059 feet. This is a true vertical depth of 6,973 feet, or 9 feet higher than No. 1. In deflecting the relief well it was assumed that the bottom of the cratered well was approximately vertical with the surface location, and if this was correct, the bottoms of the two wells are within 4 to 6 feet of each other. Reaction of the relief well during the pumping of water indicated the bottoms were reasonably close.

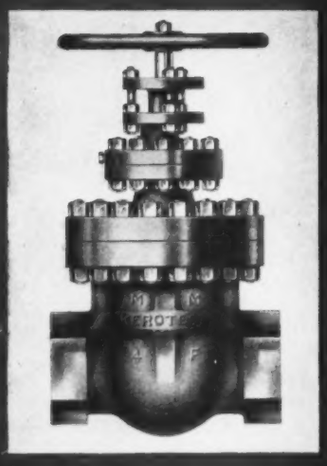
In assuming the bottom of the cratered well was approximately vertical with the surface location there was a possibility of an error that might have meant failure. In that well no hole surveys had been made below 5,000 feet, and above 5,000 feet, although the hole had been surveyed during drilling for deviation from vertical, there was no check as to direction of drifts. Considering the depth, a slight deviation from vertical would have placed the bottom a material distance from the surface location, and with knowledge of direction or the drift, although small, the location of the bottom could not be determined.

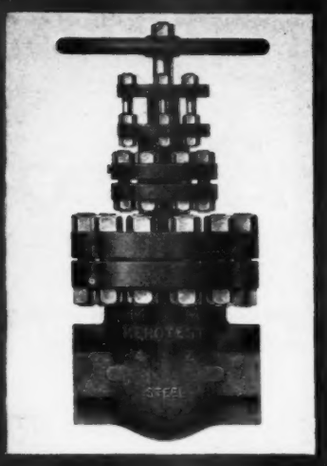
Before the relief well was started, however, engineers of Eastman Oil Well Survey Co., under whose direction the well was drilled, and operators made a study of the drifting tendencies of two abandoned tests drilled in that area, and in which directional surveys were made. It was learned each for the first couple of thousand feet drifted northwest, and then turned directly southeast. It was concluded, general formational conditions being the same, that the blow-out had drifted similarly, and if so the bottom should be about vertical with the surface location. It was believed best to follow this conclusion. As further check, the drifting tendencies of the relief well were studied. In this well, to a depth of 2,096 feet, where the Eastman engineers took charge and where the first multiple shot hole survey was made, little attempt was made to keep the hole vertical for that particular purpose. The survey at that depth showed the bottom to be 13.58 feet south, 28.06 feet west of the surface location, which was to the right and in the wrong direction from the cratered well.

The relief well was spudded August 17 and 20-inch conductor pipe was set at 63 feet, this being cemented with 75 sacks. Two days later a string of 16-inch surface pipe was run, this sticking at 120 feet, where it was left uncemented. The final surface casing, consisting of 10¾-inch, O.D., 40½-pound, 8-thread pipe, was cemented at 1,494 feet. August 21, using 1,200 sacks of cement. Plug of this was drilled August 24, and the hole carried to 2,096 feet, where the Eastman engineers took charge and where the first controlled directional work was started. From the latter depth to 7,027 feet, a total of 4,931 feet, hole was made in 28 days, an average of 176 feet daily. Considering the time required for running whipstocks, taking directional surveys, and reaming, this is believed a record. In making that hole, a total of 71 round trips were made requiring a total of 186.5 hours; 10 whipstocks, including one Brewster deflecting tool, were set requiring 46.5 hours for trips and 10 hours for rigging up; a total of 60 single shot runs were made taking a total of 34.5 hours; 81 single shots were made requiring 35.1 hours; nine trips were made to ream the hole made by the pilot bit following the whipstock, re-



Cement truck hooked up to relief well pumping water into sand to kill the burning crater well





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quiring 29.5 hours; and 45 hours were spent in circulating other than after reaming pilot bit hole. Total time consumed when not drilling was 387.1 hours, or 16.13 days, leaving 11.87 days actual drilling time.

After the first multiple shot survey was made at 2,096 feet, where the bottom was found 13.58 feet south and 28.06 feet west of the surface location, the hole was drilled to 2,191 feet, where a single shot survey showed the bottom 1° 10′ south 45° west from the original location. At that depth the first whipstock was run to turn the course of the hole from the west around to the east in the direction of the cratered well. The Brewster deflecting tool was run at 2,251 feet following a single shot survey at 2,210 feet, where the bottom was 3° 50′ south 28° east from the surface location. Whipstocks were run at 2,307 feet, 2,367 feet, 2,555 feet, 2,675 feet, 3,226 feet, 5,736 feet and at 5,858 feet. The use of so many whipstocks was necessary because the hole had such a tendency to turn to the right and away from the direct course that control of direction by weight and speed of drill pipe was not sufficient. The broken formations, consisting largely of sands and sandy shales made it difficult to maintain a course. From 5,919 feet to bottom, however, the course was controlled entirely by weight and speed. A deflection of 12 degrees was desired.

DRILLING TIME OF RELIEF WELL

Total hole drilled	4,928 ft. (from 2,096 ft. to 7,027 ft.)
Total time	28 days.
Average depth per day	176 ft.
Average depth per hour	7.3 ft.
Total round trips	71
Total time required	186.5 hours.
Average time per trip	2.62 hours.
Total round trips whipstocking	10 (includes Brewster tool)
Total time	46.5 hours (includes drilling)
Average time per whipstock	4 hours, 40 minutes
Total time rigging up W.S.	10 hours.
Average time per W.S.	1 hour
Total single shot runs	60
Average time per run	34.5 minutes
Total single shots	81 (used double S.S. bbl. on some)
Average time per S.S.	26 minutes
Total trips reaming (pilot bit following W.S.)	9
Total time required	29.5 hours (includes ream. and circ.)
Average time per run	3 hours
Time spent circulating other than after reaming of pilot bit	45 hours.

At 7,027 feet, 7-inch casing was cemented. The first cement job was not entirely successful, so a delay was occasioned pending a second cementing attempt. In this a Baker cement retainer was run and a squeeze job made. When the cement retainer and plug were drilled out, operators attempted to take a 10-foot core but were unable to get recovery, and went in with a bit and made 19 feet additional hole to 7,059 feet, (measured depth).

Water was pumped into the sand through the 4½-inch drill pipe run into the hole with a 6⅛-inch wire line core bit on the bottom. The bit was provided to facilitate deepening the hole if desired. No screen or liner was set.

Frank Kellogg, in direct charge of operations for Eastman Oil Well Survey Co., is given credit for success of the undertaking. Despite the deflection of the hole, the 7-inch casing was run without a hitch, and no weight was required to get it to the bottom.

A company rig, most of which was purchased new for the job, was used in drilling the relief well. All equipment was of extra heavy duty type. Three 350-pound working pressure boilers generated steam and in operating pumps circulating water into the sand. The greatest hazard was in drilling through the shallower sands, which could have become charged with high-pressure gas from the blow-out. In drilling the hole to the seat of the 10¾-inch casing at 1,494 feet, 12-pound mud was used. Sufficient cement was used in cementing that string to cement the hole from bottom to top to prevent blowing out of the shallow sands around the outside of the casing. The remainder of the hole was drilled with mud averaging 9.8 pounds and with viscosity ranging from 25 to 30.

What is to be done with the relief well has not been determined. It is possible screen will be set and an attempt made to complete it where it is to recover what oil it can. However, in setting the 7-inch casing only a comparative small amount of cement was used so this casing can be pulled without particular trouble, and eventually the deflected hole will be plugged and a vertical hole drilled from the bottom of the 10¾-inch casing to the sand.

A survey of the crater shows a depth of 72 feet from the surface level to the top of the fluid standing in the crater. No sounding has been made of the bottom of the crater. The crater is estimated from 350 to 400 feet in diameter.

Production of the well while running wild and burning was estimated as high as 30,000,000 to 40,000,000 feet of gas and 1,000 to 2,000 bbls. of oil daily. Estimates, however, are purely guesses. The well blew out before completion, and no gauges were possible. In its blow-out it swallowed all drilling equipment except boilers. The well definitely proves the existence of a new field.

W. F. Moore Heads Cracking Development Conference

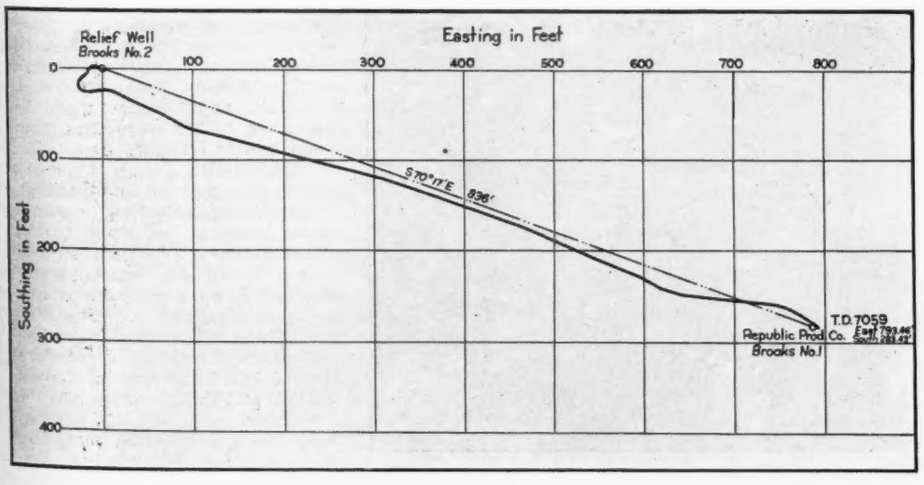
The eighth annual Cracking Development Conference, attended by a group of leading petroleum technologists, held its sessions, September 22, 23 and 24, at Essex House in New York City. Participating in the conference were representatives of the Standard Oil Co. (Indiana), Texas Co., Standard Oil Co. of New Jersey, Gasoline Products Co., and M. W. Kellogg Co. William F. Moore, president of Gasoline Products Co., was general chairman of the meetings.

Members of the conference meet annually to consider the latest advances in design and engineering, research and development, and plant operation, pertaining to the processes of cracking for the production of gasoline. Cracking technology has become highly complex and its literature voluminous. The conference is found increasingly valuable as a coordinator of results. It serves as a clearing house for improvements, and acts as a committee on standards used in the design of cracking equipment.

WILLIAM F. MOORE

On September 23, the conference was privileged to view some of the largest welded steel vessels in the world, now being built in the plant of the M. W. Kellogg Co., at Jersey City. These are being constructed for the Texas City, Tex., plant of the Pan American Petroleum & Transport Corp. The installation for which they are being built will constitute one of the two largest cracking plants in the world. The visiting technologists were given opportunity to study the advances which have been made in the welding technique applicable to very large units, also to observe the corrosion protection methods most recently being used in the petroleum industry.

The object of the Cracking Development Conference is to correlate experimental and plant development work in pyrolytic cracking, which is carried on in the laboratories and refineries of the participating companies. Development of new features in the design and operation of equipment for pyrolytic cracking is a function of several associated refiners, the results of which are available to licensees. Designs and improvements pertaining to the several processes, as well as combination units, are licensed to the industry under the scope of cracking patent rights of the Gasoline Products Co.



Horizontal projection of relief well drilled to kill the Silsbee well

Detects Presence of Other Oils

The Pennsylvania Grade Crude Oil Association requires that motor oils represented as having been refined from Pennsylvania grade crude contain no oil produced in other areas. To detect the presence of other oil in the refined product the association employs Doctor Fenske of Pennsylvania State College, who is able to determine whether or not crude oil of lower cost has been used, either in full or in part. He is generally able to determine what region produced the other oils present. This is done by a series of indices, such as viscosity, gravity, and boiling point. By comparison between a sufficient number of physical and chemical properties one or more can be found with an index varying widely from the corresponding index for Pennsylvania grade oil.

Recent Developments Related to Petroleum Engineering

By JOSEPH JENSEN
Chief Petroleum Engineer, Associated Oil Co.

Recent developments related to petroleum engineering discussed in this paper are: (1) The acid bottle go-devil vs. mechanical and photographic devices for determining inclination of drilling wells. (2) Drilling wells in with oil or the use of chemical compounds or "mud solvents" for removing rotary mud from wells in order to increase or make possible oil production. (3) Comparison of results of electrical logging methods in locating water, as shown in a recent test on a well in the Los Angeles Basin. (4) A new method for logging formations through casing, known as the Stratagraph.

ACID BOTTLE GO-DEVIL VS. MECHANICAL DEVICES

The use of the acid bottle go-devil for determining inclination of oil wells was put on a practical basis by McDowell Graves of the Associated Oil Co. at Santa Fe Springs in the months of May and June, 1929. It spread rapidly to other oil fields in the state and then through the California industry. The acid bottle having thus established a simple way of developing this information immediately invited the creation of substitutes. These substitutes are of four kinds: First, those that photograph a plumb-bob made of an open ring with cross wires; second, those that photograph level bubbles; third, those that mechanically punch a graduated disc; and, fourth, those that use a colored fluid to establish a record on paper.

The great advantage that the acid bottle has over all other substitutes has been its simplicity and the fact that nothing could go wrong with the fluid level of the hydroflouric acid which etched the line in the glass. This advantage exists also in the fourth substitute.

The objections to the acid bottle have been that the acid is corrosive and injury from its use may result to those not familiar with or warned as to its danger; that the line etched may be irregular so that it cannot be read readily; and that, in order to read the line, it may be necessary to fill the bottle with a fluid of about the same density as the diluted acid so as to secure satisfactory readings.

The degree of perfection which has been achieved in the substitutes for the acid bottle makes it difficult to say anything more favorable about one than another. About the worst that can be said of the photographic substitutes is that they take a little time and require handling solutions that must be kept fairly clean. Some of the mechnical substitutes require an adjustment or setting for the depth to which they are run that may result in an error in setting the instrument, although this happens very rarely.

Those instruments that photograph a level bubble have just as great an advantage as the instruments that depend upon a fluid, as a level bubble can hardly be expected to go wrong. While the size of the bubble will vary with depth due to temperature, this is not an objection or a defect. The method of reading is to reverse the manner in which the record is made, viz., the level bubble is centered on the reading chart and the cross made at the center of the disc before running is read off-center on the reading glass.

The fourth substitute mentioned, which uses the colored fluid, makes such a compact record that some people reading it have experienced difficulty in reading to so fine a degree.

Most of the substitutes at the present time are scaled to read up to 10 degrees. This is unnecessary because drilling practice in the past five years has advanced to the point where no operator permits his well to deviate above 3 to 4 degrees, so that a 5-degree reading is a practical maximum to be encountered in wells. Operators of all of these mechanical substitutes would do well, therefore, to make an instrument that would read only to 5 or 6 degrees and thus permit an enlargement of the concentric circles and a more accurate reading of the quarter and half degree points which must now be estimated.

As against all of these substitutes, the acid bottle has now given way in most oil fields. The only advantage which the acid bottle still has over the substitutes for it is that it costs less to run, even though the extra time of the well crew is balanced against the service charge for the use of any one of the instruments. The Associated Oil Co. still continues to use the acid bottle in the Ventura Avenue field. From time to time it has conducted investigations to make certain that there is a substantial saving in running the acid bottle, as compared with the various substitutes. The latest of these studies was made within the last few months. The result of this study confirmed the fact that it is still cheaper to use the acid bottle than to use the substitutes. An analysis of acid bottle runs between January 1, 1935, and July 31, 1936, discloses that 2,520 runs were made during this period, as shown in the following tabulation:

		Average number per well drilling
212 runs were made between	0-1,000 feet..	11
227 runs were made between	1,000-2,000 feet..	12
206 runs were made between	2,000-3,000 feet..	11
367 runs were made between	3,000-4,000 feet..	17
334 runs were made between	4,000-5,000 feet..	16
382 runs were made between	5,000-6,000 feet..	20
531 runs were made between	6,000-7,000 feet..	31
204 runs were made between	7,000-8,000 feet..	20
55 runs were made between	8,000-9,000 feet..	28
22 runs were made below	9,000 feet	22
2,520 runs		

During this 19-month period an average of 133 readings were taken per month, requiring an average of five containers or go-devils, and therefore representing 27 runs per month per container.

The only saving resulting from eliminating or reducing the time for running the acid bottle is in the time of labor, which is paid for. While it is true that other items at the well are charged for at a time rental basis, this is an accounting procedure which, if it results in a profit, is redistributed and does not represent a loss to the company. Therefore, the saving in labor is at the rate of $7.50 per hour, or $180 per day.

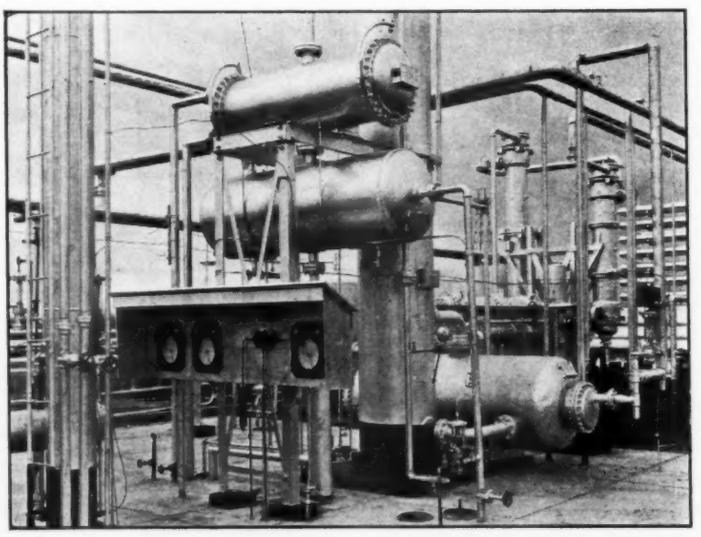
Experience has shown that the proper etching of a faint line on an acid bottle requires only from four to six minutes and that any time in excess of eight minutes is entirely unnecessary. The only additional time chargeable against the acid bottle is, at the most, eight minutes. The excess time spent in a month on the acid bottle for 27 runs at eight minutes would be 216 minutes, or 3.6 hours. At $7.50 per hour this would represent an expenditure of $27. The cost for acid, bottles and container is about $4 per container per month, so that the total acid bottle expense would be $31 per month. All of the instruments that are used on a rental basis call for rentals in excess of this amount. The best substitutes cannot be rented for less than $100 per month, if rented singly, or $90 per month if more than four are rented. Furthermore, in the above study, an average of five go-devils was used, but as the number of strings of tools was sometimes above five, it would mean that in those months even more than five instruments would be rented, hence the rental charge would be somewhat higher than has been made in this estimate.

There are times when it is necessary to read the acid bottle with extreme accuracy. For this purpose a device has been developed by McDowell Graves. When this is necessary it is believed that one of the substitutes for the acid bottle is more desirable in permitting a close reading. Except, therefore, for this limitation, the experience of the Associated Oil Co. has shown that the acid bottle is still cheaper to use than the substitutes.

During the time that our California fields showed high gas pressures, the pressure of the gas within

(Continued on Page 48)

A.I.M.E.—Paper delivered before Pacific Coast meeting, Petroleum Division, Los Angeles, October 1-2, 1936



Fractionating and stabilizing equipment in the new Galva, Kans., plant of the Natural Gasoline Corp.

Butane Engine Drilling

By L. R. SMITH
Chief Resident Engineer, Producing Division, Associated Oil Co.

Butane operated drilling rigs are a recent innovation in the petroleum industry. For this reason extensive data on the operation of such equipment is not available. However, from experience to date it is evident that, within limitations, as much can be accomplished with butane as with steam at a very decided reduction in expense of installation and cost of operation.

Commercial butane is a liquid motor fuel similar to gasoline, but very much lighter—so light, that it has to be stored under pressure. At 10° F. it is liquid at atmospheric pressure, but at 100° F. it has a pressure of 70 pounds or more. As soon as the pressure is reduced, it turns to vapor and in that state is far more easily mixed with the air necessary for combustion.

Commercial butane is usually mixed with propane, the proportions being from 5 to 20 per cent propane and 80 to 95 per cent butane. The following characteristics, therefore, are subject to variation:

Weight per gallon, lbs.	4.7
B.t.u. per pound	21,000
B.t.u. per gallon	100,000
Pound fuel per h.p./hr. (under full load)	0.43 to 0.6
Specific gravity of liquid	0.57
Specific gravity of gas (air = 1)	2.0
B.t.u. per b.h.p.	9,000-13,000
Admissible compression ratio	7 or 8 to 1
Admissible compression pressure	140 to 170
Ratio air to gas (by volume)	29.5
Ratio air to gas (by weight)	15.7

Butane is now considered one of the finest and most economical fuels obtainable for use in internal combustion engines. Because of the fact that butane is used in the engine as a true gas, uniform distribution of fuel to all cylinders is obtained. There are none of the difficulties occasioned by wet fuel on the walls of the manifold and cylinders, such as occurs with even the best gasoline. Crankcase oil dilution is eliminated, practically complete combustion is obtained, and there is no carbon deposit from the fuel. Because of this cleaner combustion, oil consumption and engine repairs are reduced.

Butane is a liquefied hydrocarbon, nonpoisonous and noncorrosive. Butane is transported and stored as a liquid, but utilized as a gas. It has an octane rating of approximately 100, while that of the best refinery gasoline with Ethyl fluid added will probably not exceed 81.

Butane is not unduly hazardous. The limits of inflammability, or explosive range of the gas, is lower than that of other commercial fuels. Special tanks are required and a difference in procedure of handling must be observed. The precautions necessary are somewhat different from those involved in the use of gasoline, but when proper tanks, hose, valves, and other equipment are used, there is very little risk of accident.

Butane first came into notice as a refrigerating agent. It was trapped in the old Salt Lake field near Los Angeles in 1913 and was used in refrigeration to a limited extent for a number of years. Later, in different combinations, as commercial butane, it was used for heating and lighting.

It was not until 1929 that a carburetor was designed to successfully use butane as a motor fuel. Due to the lack of publicity it did not come into prominence until 1932 when it began to be applied to truck and tractor operation.

In California, it was not until 1935 that any attempt was made to utilize this product as a source of power in oil well drilling operations. At that time one of the major oil companies successfully equipped two single engine rotary drilling outfits to operate on butane. This lead has been followed by others in the industry until at the present time there are approximately 25 drilling units in California of varying horsepower and type of hook-up, using butane.

***A.I.M.E.*—Paper delivered before Pacific Coast meeting, Petroleum Division, Los Angeles, October 1-2, 1936**

At present there are three popular methods of utilizing the power of internal combustion engines in the operation of rotary outfits, each of which has been butane equipped.

Type 1. A single engine coupled directly to the drawworks with a separate engine for the mud pump drive.

Type 2. A dual engine installation wherein the pumping engine may be compounded with the drawworks engine for double hoisting capacity.

Type 3. A D.C. electric outfit with one or two engines acting as prime mover for generating the necessary D.C. current, to handle the drawworks, mud pumps, and other appurtenances connected with the rotary drilling operation.

In case the operator so desires he can convert his present gasoline equipment by the installation of butane carburetion and a change in compression ratio. If the equipment is in good serviceable condition this can be accomplished at a nominal cost and will vary with the type and horsepower of the engines in question, ranging from $170 to $350 per engine. To this must be added the cost of pressure tanks for butane storage.

In the purchase of new equipment the expenditure will depend upon the horsepower required for the drilling depth contemplated. A light single engine outfit for wells to 2,500 feet, including only the drawworks with a 125-horsepower engine and one 6¾-inch by 14-inch mud pump with 150-horsepower engine equipped for butane, with storage tanks, can be purchased for $18,000; a dual 150-horsepower hook-up with 7¼-inch by 14-inch pump for 4,000-foot depth will cost $26,000, and a dual 250-horsepower rig with a 7¾-inch by 16-inch power pump and starting compressor for drilling to 7,000 feet can be purchased for $40,000. Stand-by mud pumps may be added to the above as desired.

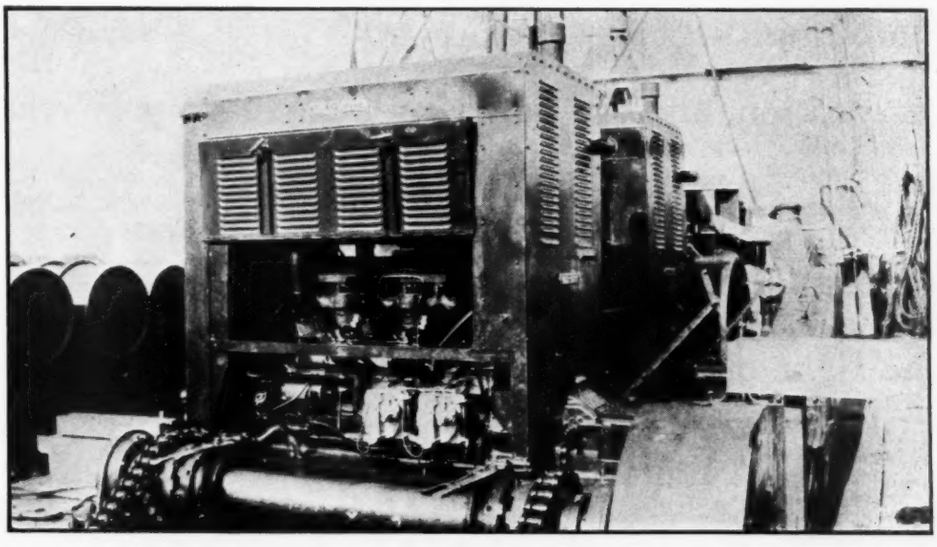
In the matter of installation expense, there is a definite saving of approximately 85 per cent in time and cost of moving in, rigging up, and tearing out a butane operated drilling unit as compared to a conventional steam outfit with boiler set-up of equal drilling capacity. This may amount to as much as $2,500 saving for each well drilled, depending upon the topography at the well location and upon the number of wells drilled from the particular boiler plant.

It is not necessary to describe the manipulation of the various styles of butane drilling outfits as most producers have observed similar rigs in operation on other types of fuel. However, some mention of results accomplished and figures on cost of operation will be of interest.

Referring to the single engine hook-up, Type No. 1: A unit of this type operated by Associated Oil Co., including a 125-horsepower, 1,800 r.p.m. engine, on the drawworks with a 150-horsepower, 900 r.p.m. engine on the mud pump, is making very satisfactory progress on wells to 2,200 feet, setting 8⅝-inch casing at 1,950 feet with 6⅝-inch liner to bottom. The rate of drilling is averaging 375 feet per day to point of coring. Latest report for a completed well shows:

Total engine operation, hours	247
Total butane consumed, gallons	1,947
Average butane per hour, gallons	7.9
Total cost butane at 3.06 delivered	$115.62
Average cost butane per hour	$.468
Total lubricating oil used, gallons	43.5
Total cost lubricating oil	$19.14
Total cost engine repairs	$48.00
Total cost operation and maintenance	$182.76
Av. cost per hr., operation and maintenance	$0.740
Av. cost per ft. of completed well	$0.083

These figures, based on butane at a price of 5 cents per gallon at the plant, cover cost of engine



Dual 250-horsepower drilling unit operating on butane at Associated Oil Co. No. 1 Murphy near Sargent, California

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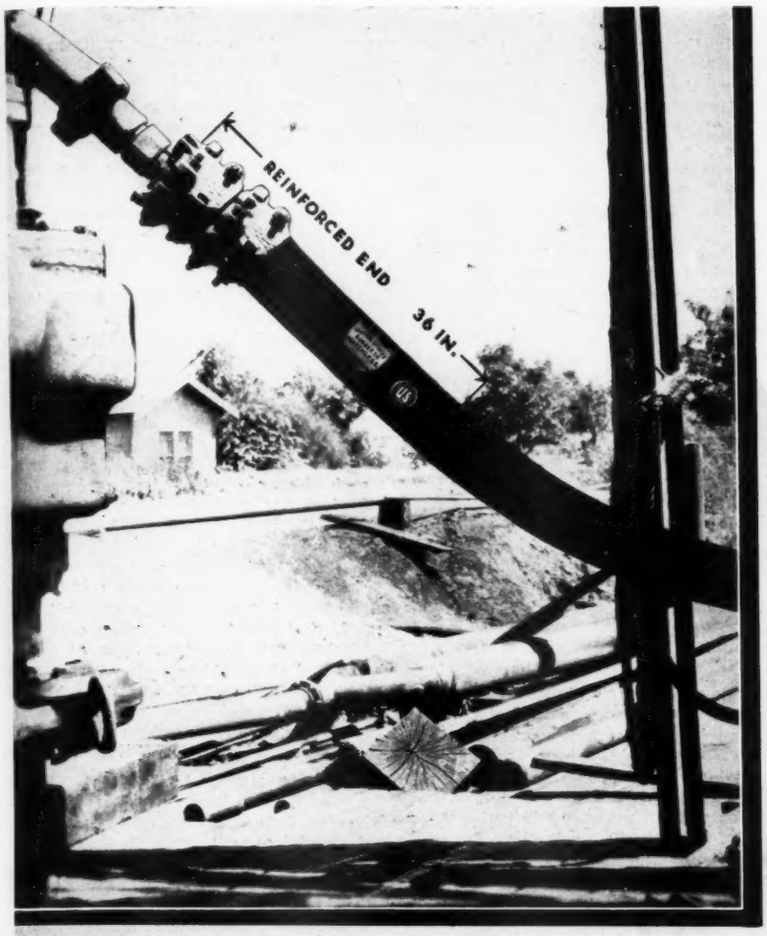

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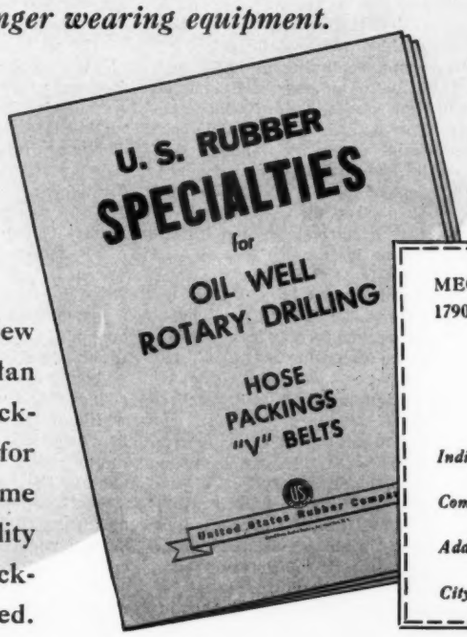

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operation and maintenance only and do not include amortization of the equipment.

The cost of drilling with the dual engine outfits, Type No. 2, is proportionately higher than for Type No. 1, influenced by larger hole size and greater drilling depths. Although not recommended for drilling beyond 7,000 feet these rigs are sufficiently flexible and, within their limitations, possess facility of operation approximately equal to that of steam. For example, a dual 150-horsepower unit in use by Associated Oil Co., drilling at 3,500 feet with 4½-inch, 16.6-pound drill pipe, coring continuously, is coming out with six cores in 24 hours, making from 100 to 120 feet of 12¼-inch hole. The operation of setting back one stand of pipe requires an average of 1½ minutes elapsed time.

The cost figures for the largest dual rig of this type operated by the same company, including two 250-horsepower, 1,800 r.p.m. engines, drilling 14¾-inch hole and coring continuously, will serve to illustrate the expense of this type of operation. Actual data taken from monthly field report shows for one month:

Total engine operation, hours	564
Total butane consumed, gallons	6,956
Average butane per hour, gallons	12.3
Total cost butane at $.07 delivered	$486.92
Average cost butane per hour	$0.863
Total lubricating oil used, gallons	91
Total cost lubricating oil	$33.22
Total cost engine repairs	$80.00
Total cost operation and maintenance	$600.14
Av. cost per hr., operation and maintenance	$1.064

These figures cover operation and maintenance of engines only. In comparison, a steam plant of equivalent capacity will cost approximately $3 per hour to operate. The butane equipment, therefore, will effect a net saving of $46.50 per day or $1,395 per month. Combining this with the saving in installation costs, in consideration of four wells drilled in 12 months at widely separated locations, a total saving of $27,000 may be realized annually by the use of this butane outfit.

As to Type No. 3, D.C. electric: As yet there is but one butane rig of this design in operation in California. It has been placed in service by the Union Oil Co. within the last three weeks and figures on cost of operation are not available. Likewise, it is too soon to secure report on results accomplished. However, with this type of layout the extreme depths can be attained and it is predicted that this particular application will be highly successful.

We must not lose sight of the fact that gasoline, is a desirable fuel for use with above type of equipment in the replacement of steam. The advantages in the use of butane are the matter of price and the fact that it is a cleaner motor fuel.

It is true that there are yet definite improvements to be made in the application of butane to internal combustion engines. It must be borne in mind that all such installations up to the present have been made on engines designed for gasoline fuel. To operate more successfully on butane, these engines must be redesigned with improved manifold and combustion chambers. In connection with the carburetion also there is room for material improvement, particularly in the design of the heat exchangers. No doubt the manufacturers will, with the present activity in the application of this very desirable fuel, in the immediate future perfect equipment which will show increased efficiency and economy of operation.

Recent Developments Related to Petroleum Engineering

(Continued from Page 44)

the formation was sufficiently great to break down the mud wall or cake formed while the well was drilling. That this did not always occur was demonstrated by the fact that in some of the older fields new wells were sometimes drilled having substantially higher initial productions than some wells nearby. The explanation seemed to be that some sands were mudded off in the original drilling. Their pressure was then not great enough to break down the mud wall in competition with the pressure of higher pressure sands, but the situation reversed itself so that a later well benefited by the pressure in these originally weaker sands. As time passed on, in wells deeper than 5,000 feet the difficulty of bringing wells on production became more pronounced. This led to a hunt for substitutes. A number of these have been tried. The one which has proved most successful in our experience at Ventura is known as the Nobs solvent.

In the case of Associated-Ventura Land & Water Co. well No. 1, when recompleted in February, 1936, about 10 days were spent in trying to bring the well in in the regular manner, but only about 113 bbls. of water could be swabbed from the well, and even this quantity decreased as time passed. The Nobs solvent was spotted in the bottom of the hole opposite the perforations, inverted Guiberson swab rubbers were used on the drill pipe and the hole was down-swabbed in stages beginning at the bottom of the hole. The well was allowed to stand and the mud was bailed from the hole. The down-swabbing was repeated and, after standing, mud was again bailed from the hole. This operation was continued as long as substantial quantities of mud were secured. It is estimated that more than 2 tons of solid material was taken from this particular well. When the well was placed on the pump, it built up a production of more than 200 bbls. of oil per day in less than 10 days, and at the present time is making 300 bbls. gross and 279 bbls. net.

Another method being used at the present time is to drill wells in, using oil as a circulating fluid rather than mud. In one well recently drilled circulation was not reestablished to the surface in drilling the last 800 feet of hole. About 18,000 bbls. of oil were used as drilling fluid. Despite this fact, the cuttings made in drilling seemed to have gone into cavities or into formations in such a way as not to interfere with the production of the well upon completion. Experiments are still being conducted, using oil as a drilling fluid and also using Nobs solvent for removing rotary mud.

As is well known here in California, there are at least two service companies who make electrical logs of drilling wells. In recent months one of these companies has stressed particularly its ability to detect the presence of water in oil horizons. The other service company has always made a similar claim, but has not particularly stressed this part of its service. There are times when the value of this information is very great.

In the drilling of an edge well in one of the fields in the Los Angeles Basin, in order to make the best record possible, engineers of the Associated Oil Co. decided to core carefully the bottom 700 feet of the hole. The first expected cementing point was around 6,000 feet, but oil sand with streaks of gray sand were found so that the coring was carried on to 6,212 feet, where after finding more than 50 feet of oil sand below a shale body, it was decided to cement the water string in the shale. A successful shutoff was secured. As a precaution, it was decided to core the entire oil zone. Continuous coring, beginning at 6,212 feet, was carried to 6,605 feet. One may well imagine the disappointment that resulted from finding gray sand about 4 feet below 6,212 feet. While the core recovery was remarkable during this entire interval, only 3 feet of the last 15 feet were recovered. This consisted of 1 foot of loose coarse-grained oil sand and 2 feet of firm oil sand.

The two competing electrical coring instruments were run. The one instrument was able to run to a depth of 6,598 feet; the other ran to a depth of 6,605 feet, but the right hand side of its record was missing below 6,560 feet. The one operator reported best saturation from 6,530 to 6,595 feet. Based on coring, a cementing point of 6,410 feet was chosen, and this point was selected as the proper cementing point by one of the service companies.

With, therefore, the assurance of the core record that nothing but oil sand was cored in the bottom of the hole, with the encouragement of one of the service companies that the best saturation was from 6,530 to 6,595 feet, and with no warning from the service company which stressed its claim to identify salt water in oil zones, everything seemed to indicate that there was no trouble ahead. But when the well came in it produced 300 bbls. of oil and 100 bbls. of salt water. In fairness to the service company which stressed its ability to locate salt water, it should again be stated that the right hand curve of the record submitted, from which the water determination was to based, ended at 6,560 feet. In so far, however, as the oil company is concerned, the hole was open to 6,505 feet and the right hand part of the record was made to that depth.

When the well proved to be wet it was necessary to kill it and have a third service company make a run to locate the water. A very fine record, showing the location of the water from 6,580 to 6,595 feet, was secured just about in the interval where the last core failed to get a satisfactory recovery and also within the depths to which both service companies were able to run their instruments. The well was then plugged with cement to 6,546 feet. When placed on production and even after washing with the Nobs solvent, it was impossible to get more than about 100 bbls. of fluid out of the hole, of which about half was water and about half was oil. This last evidence confirmed the last test made by the water locating company that the water was in the bottom of the well. It did not conflict with the coring evidence because most of the last core was not recovered. One of the service companies again reviewed its record and claimed that, in addition to indicating as reported, that the best saturation was from 6,530 to 6,598 feet, the record had been interpreted incompletely and that evidence of water at 6,585 to 6,590 feet was indicated by a breaking back of its right hand curve.

LOGGING FORMATIONS THROUGH CASING

During the past year and a half the Oil Well Water Locating Co. has been experimenting in the hope of logging formations behind casings. It is recognized and fairly well accepted, at least by a certain portion of the industry, that formations can be logged electrically in open holes. The new method developed in this experimental work is known as the "Stratagraph." Within the present year it has been used successfully at Santa Fe Springs to locate oil sands only 25 feet thick and at Ventura it has been used to locate a gas sand. As the ability to make the record and to interpret it grows, this device should be of great value in old fields where it is desired to shoot casing to secure oil sands that have been left behind the pipe.

The method is based upon the electro-motive series of metals. Two circuits are established, and nearly balanced against each other: the difference between the two making a record which is interpreted. Each of these circuits is so regulated with resistance that it has about the same strength as the other, their variations being affected by the electrical effect of the fluid in the formation, which serves as an electrolite. The first circuit includes a zinc rod driven in the ground approximately 150 feet from the well. The current flows from the zinc rod through the earth to the casing of the well and is returned to the zinc rod from the casing through a wire in which the recording instrument and the resistance are placed. The second circuit includes a zinc plate suspended on an insulated wire line inside the casing. The fluid in the casing may be oil field water, fresh water, salt water or mud, but of the same consistency. This creates a constant electrolitic action between the zinc plate and the casing. The current flows from the zinc to the casing and from the casing through the earth to a copper ground located approximately 100 feet from the well. It returns from the copper ground through the recording instrument and the resistance down the cable to the zinc plate. These two currents flow in opposite directions. The only purpose of introducing the resistance in one of the circuits is to limit the swing of the needle of the recording device to the width of the paper on which the record is made. As the suspended zinc plate is raised or lowered in the well and comes opposite the different beds outside the casing containing fluids of different strength, currents of different magnitude are set up. Thus the record is made. Where the record swings widely to the left, it indicates shale and where it swings widely to the right it indicates sand. The attached sketches are submitted in support of the foregoing explanation of the two circuits.

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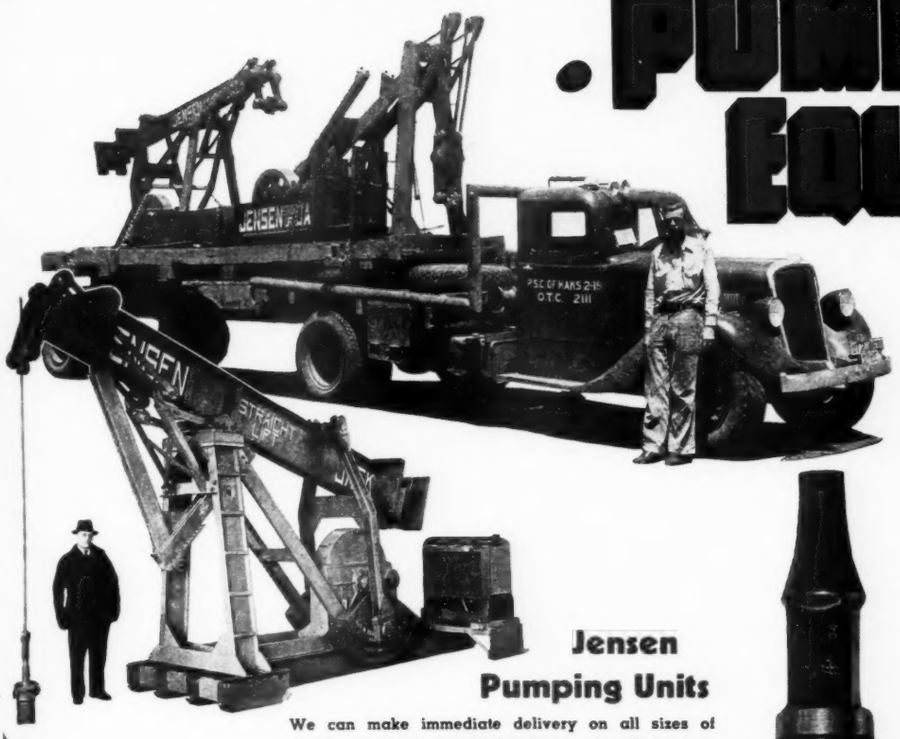

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Anticipating your needs, we have stocked liberally of the proven pumping equipment of the industry's most dependable manufacturers, assembling these stocks at strategic distributing points for rapid and economical delivery to any well within the confines of the vast producing territory covered by our service.

We are never too busy to give your call for service, or for equipment, the prompt and individualized attention that every order, large or small, receives at our hands—we are prepared to supply what you want, when you need it.

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Magnolia Pipe Line Reconditioning Job Nearing Completion

By L. E. BREDBERG

The Magnolia Pipe Line Co. is now in its second year, and on its last lap on the largest pipe line reconditioning job carried on by a pipe line company. When completed, some 1,000 miles of pipe, mostly 6-inch, will have been taken out of the ground, inspected, reconditioned, doped and wrapped and replaced in the ditch to serve as carrier for oil from the North Texas, Panhandle and West Texas and Southwest Texas fields.

Last year the company reconditioned 550 miles, all of Nos. 2 and 3 lines in the 3-line system from Corsicana to Beaumont being overhauled, with 150 miles of line from Luling to Beaumont re-

Pipe line crews working on the Brazos River crossing. Seven of the 12 river clamps are shown in place on the reconditioned line

conditioned. Lines Nos. 1, 2 and 3 from Sardis station near Waxachachie to Corsicana, Nos. 2 and 3 from Fort Worth to Sardis, and the single line unit from Electra to Bowie Junction are included in this large reconditioning job, with 50 miles of the Mirando line in Southwest Texas, half of which has been completed, being reconditioned also. The line from West Texas is also included, 75 miles being worked over between Corsicana and Ranger.

All of the line being worked on is screw line with the exception of the Mirando and Luling line which was welded when laid. Welding of pipe lines was not the customary procedure when the company laid the greater part of its trunk line systems, the oldest of which is from North Texas to Corsicana, laid in 1911 and 1912, screw pipe being used in those days. All sweating and bad looking collars are now being welded in this reconditioning to prevent them from leaking or breaking out after the lines have been reconditioned and relaid. Collar leaks and "hot" soil spots are the main sources of corrosion trouble, and the company engineers are seeking causes of corrosion and methods of preventing it along with this reconditioning job, observing the work closely and keeping a complete record of all "hot spots" where corrosion has caused most damage to the pipe, as well as all work done in reconditioning the line, such as spot welding, welding collars, placing on half or full soles and sleeves, and other repair work. Such a record will aid in future maintenance as the company will know exactly where to watch for leaks and where corrosive agents are present.

Pecking out the corroded spots in the line with air-operated pecking tools

When the first line in the North Texas-Beaumont system was laid protective coatings to combat corrosion were not used, such protective measures being adopted later when corrosion was found to give trouble and cause great expense to the companies in taking up badly corroded pipe and laying new sections to replace them. However, this line was later taken up and coated with either asphalt or asphalt and paper, and some with Magnolia standard coating. This standard coating was made up of one coating of sanfemco primer, one coat of sanfemco heavy paint, an asbestos felt wrapper, which was wired on to hold the wrapper in place, and then a final coat of sanfemco paint on top of this wrapper as added protection.

The present coating method and protection is somewhat different from the first adopted coatings. A No-oxide dope is now applied to the line by hand, men massaging the dope along the line smoothly and evenly to prevent passing over and missing any pin or pit holes that might have escaped the welders. Inspectors with mirrors check every foot of the bottom, as well as observing the remainder of the pipe to see the men have not passed any places while applying the dope to the pipe.

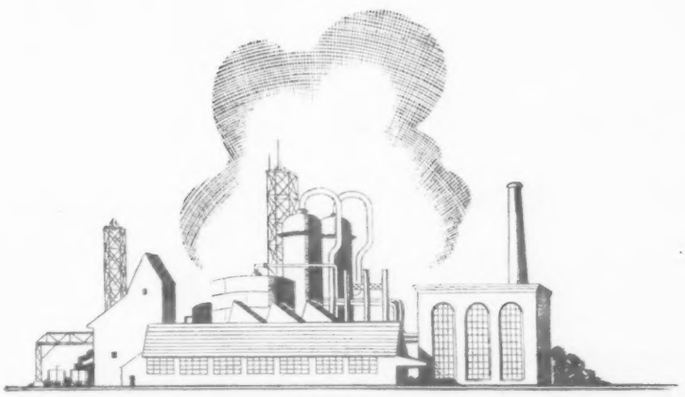
The wrapping crew follows the doping gang, spiral-wrapping the pipe with a No-oxide wrapper which adheres smoothly and closely over the dope. All flange coverings and other raised places in the line are doped and wrapped just as the regular surface of the pipe is, exceptionally smooth jobs being done in covering these raised surfaces. After the wrapper is applied a coating of Magnolia water-proof paint is used in covering the wrapper as an added precaution to keep out air, water and other corrosive elements. When this paint is dry the pipe is lowered into the hole in the cool of the day so the paint has no chance to soften and run. In some places the pipe is not placed back in the old ditch, or at its previous depth, but where erosion has caused a change in the nature of the terrain to such an extent that the pipe may be left hanging in the air, uncovered, as for instance in a ravine crossing, it may be left in that suspended position. In some places the pipe may have to be lowered and other places raised, as the case may be. A 16- or 17-inch dirt cover is used practically all along the line, except where shallower or deeper ditches are necessary, especially at stream crossings.

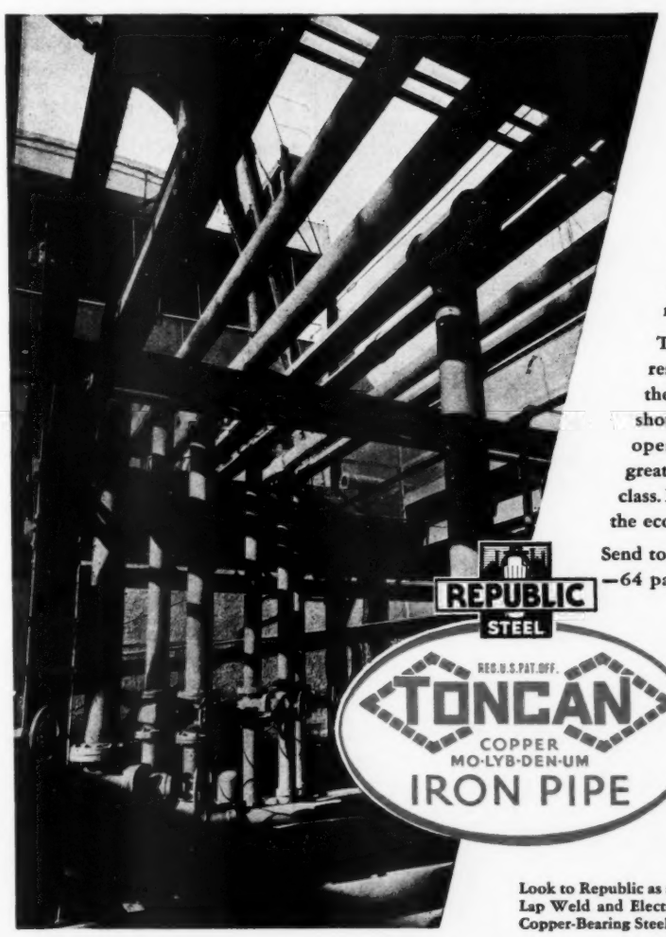
Mitchell-Stewart Construction Co. has the contract on this reconditioning work, continuous traffic being maintained through the lines while the repair work is being done. This method of maintaining service while repairing lines is considered by the company as being much more economical and prevents emulsification troubles from setting up in the lines as often happens when the lines are shut down unless they are thoroughly drained of all oil and water. Other companies do otherwise when reconditioning their lines, ideas differing.

The preparatory work to reconditioning is about the same as done by any company, ditching machines being used in making way for raising the pipe by means of tripods and ratchet jacks. Cleaning machines are then run along the line to clean it of all soil, coatings and other extraneous matter. Following the cleaners come the hand and air-operated pecking tools which peck out the deeper appearing and worst-looking corroded spots and remove rust from the pipe. Inspectors then pass along the line and check with white crayon all spots that need spot-welding, pin-hole welding

Raising the line from the ditch for the cleaning machine

It doesn't pay to skimp at the vital point - *THE PIPE*





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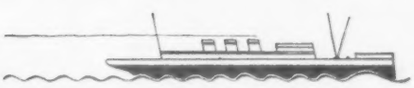

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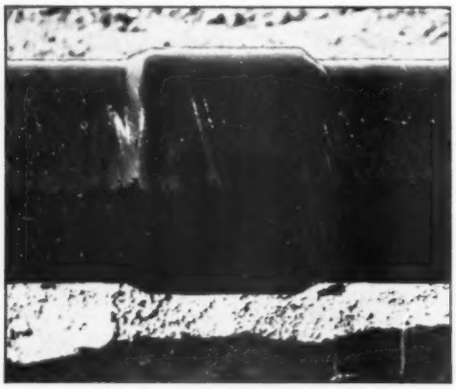


A smooth job of wrapping and painting over a welded collar on the 8-inch line

or covering with sleeves or half-soles or patches. These inspectors also check all covers and flanges for sweats and leaks as they inspect the line. If old flanges need covering specially manufactured covers which are now made at the company's machine shops at Beaumont are welded over and around the flanges, making an air-tight cover. Formerly field and hand-made flange covers were made out of sections of second-hand casing, but this was a slow and more expensive job than making them in the shop and the covers were not as reliable and did not fit as well as the shop-made covers which have been universally adopted by the company. If any collars have previously been repaired or caulked, covers are also welded over them to prevent any future leaks at these collars. Collars showing signs of sweat are welded on both sides after burning with an acetylene torch.

Following the welders a second cleaning machine is run over the pipe to insure it is perfectly clean before the dope gang sets to work. It is then given a "washing" with gasoline by crews who apply it by hand, which insures cleaner pipe for receiving the dope. Inspectors follow this "washing" gang to see that all pit and pin-holes have been welded, all patches and sleeves and covers are thoroughly sealed and the slightest leak has not been overlooked by the welders. Then the dope is applied, as mentioned above.

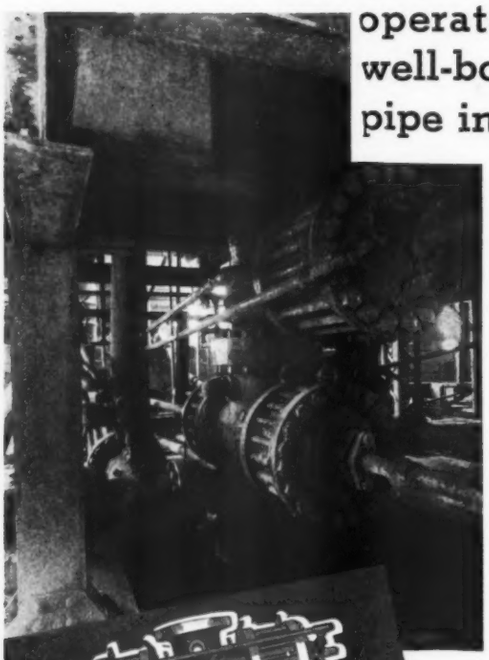
Crews reconditioning the line at the Brazos River crossing

One of the greatest sources of trouble along the line was in the old Powell field south of Corsicana, where salt water and oil, mixing, seeped down in the ditch greatly corroded it. Many patches, half-soles, sleeves, and covers and a great amount of spot-welding was necessary to repair this part of the line.

After this large reconditioning job is completed the company feels the pipe can remain in the ground many years before it will be necessary to raise it for another reconditioning or for the laying of new pipe in the hottest corrosive spots.

Picture of a CONTRACTOR TAKING NO CHANCES AT HASTINGS . . .

This triple Cameron pressure operated Hook-Up covers well-bore and flowline with pipe in or out of hole . . .



WHENEVER you see a drilling control hook-up like this under the floor of a contract rig, you have a picture of a drilling contractor taking no chances. This particular hook-up was photographed at Hastings, Brazoria County, Texas, and is one of four similar hook-ups used by the drilling contractor who owns it.

•

As shown, the hook-up consists of a 13⅜" Type SDA Cameron Blowout Preventer flanged to the surface casing. Flanged above the Preventer is a 13⅜" Pressure Operated Cameron Master Gate Valve. Flanged to the flow-line outlet of the preventer is a 7" Pressure Operated Cameron Gate Valve. Each of these units is controlled from the derrick floor by an independent 4/way control valve. Control valves are within easy reach of the driller, and have fluid pressure against them at all times. One-quarter turn of the lever of any 4/way valve opens or closes the unit with which it is connected.

A Cameron drilling control hook-up of this type provides instant and positive closure of the well bore at any time, with pipe in or out of the hole. In addition, instant and positive closure of the flow-line outlet is also assured.

There is no more completely dependable guarantee against disastrous blow-outs than is provided by a Cameron full pressure operated drilling control hook-up.

•

FEATURES

1. Instant pressure opening and closing.
2. Remote control from derrick floor.
3. Independent ram closing and locking screws.
4. Self-feeding ram packing elements.
5. Self-centering pipe rams.
6. Ram collar recesses hold pipe up or down.
7. Blind rams or pipe rams interchangeable.
8. Integral flowline outlets and body flanges.
9. . . . 22 other outstanding features.

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Grease Manufacturers Program

The following papers have been scheduled to be given at the fourth annual convention of the National Association of Lubricating Grease Manufacturers, Inc., to be held at the Stevens Hotel, Chicago, Ill., on October 12 and 13, 1936.

MONDAY, OCTOBER 12

Grease Testing Methods: Sub-committee on lubricants, bearing engineers' committee, H. R. Reynolds, chairman. Introduction: H. R. Reynolds. Demonstration: B.E.C. mechanical stability testing machine, C. R. Gillette. Demonstration: B.E.C. penetrometer and melting point apparatus, C. R. Ahlberg. "Accelerated Oxidation Apparatus, Its Design and Function," F. L. Wright. "Steel Mill Lubrication," C. R. Walter, Penola, Inc., Pittsburgh, Pa. "Fatty Acids," L. M. Sheely, Armour & Co., Chicago, Ill. "The Pros and Cons of E.P. Lubricants," C. M. Larson, Sinclair Refining Co., New York City. "Robinson-Patman Bill," D. S. Hunter, D. S. Hunter & Associates, Cleveland, Ohio.

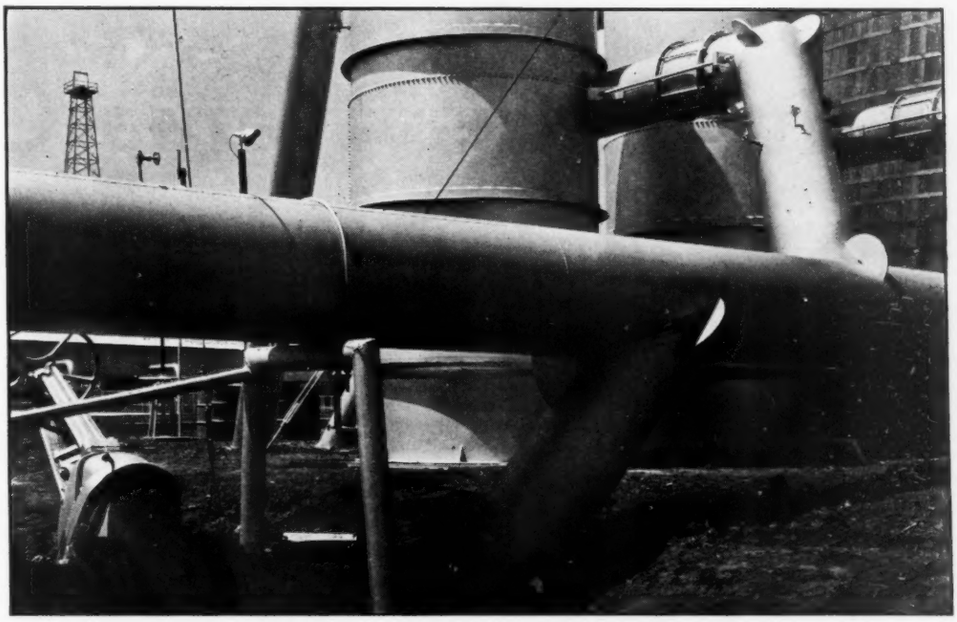
TUESDAY, OCTOBER 13

"The Fallacy of Wish-Thinking in Merchandising," F. W. Lovejoy, Socony-Vacuum Oil Co., Inc., New York City. "Public Indifference—A Challenge," Thos. J. O'Kane, Rogers, Gano & Gibbons, Inc., Chicago, Ill. "Fatty Acid Derivatives," Dr. A. W. Ralston, Armour & Co., Chicago, Ill. "Effects of Lubricants on So-Called Brinelling of Ball and Roller Bearings," J. O. Almen, General Motors Research Laboratory, Detroit, Mich. "Accelerated Oxidation Tests and Other Recent Developments for Testing Lubricating Greases," H. A. McConville, General Electric Co., Schenectady, N. Y.

OPERATING IDEAS

Headlight for Pumpers

All pumpers on the 5,257-acre lease of the Olean Petroleum Co. at Kanesholm, Pa., are provided with lights which fasten to their hats. The electricity for these is furnished by small storage batteries which are carried by a shoulder strap. The battery will furnish light for 16 hours. They are charged each day at the generating station where electricity for pumping wells is generated.

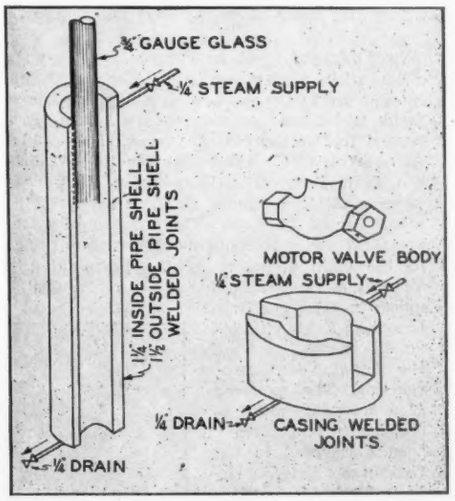


Welding Supported by Fins at All Angle Joints

At one gas booster station in the Oklahoma City field, four fins are welded to each angle joint of the field lines leading to the station. These greatly increase the strength of the welds, which are subjected to great vibration and to expansion and contraction due to sudden changes in temperature. Fins are cut from sheet steel and welded at angle joints of the line.

Heaters to Avoid Freezing

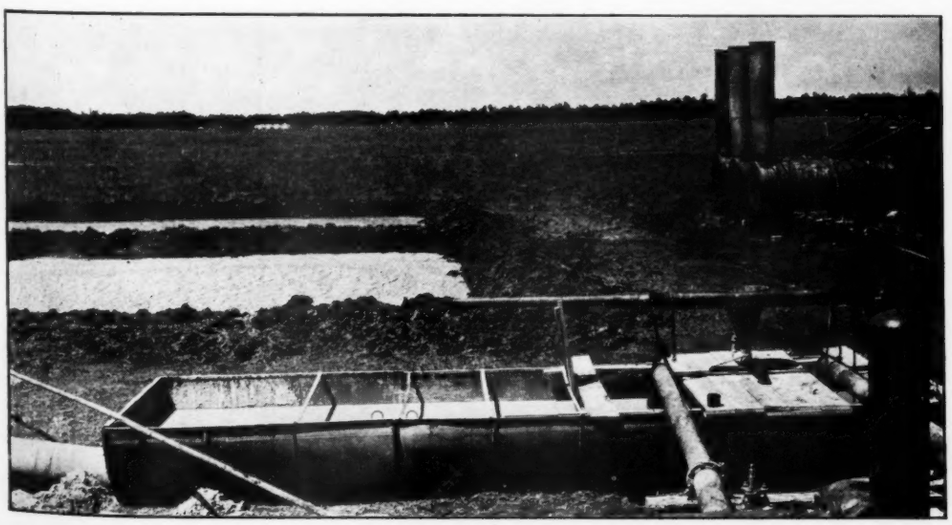
Gauge glasses, valves and instruments often cease to function in winter because of freeze-ups and the plant operator can often avoid these difficulties without a large expenditure of money for equipment. Suggestions as to the type of shapes which might be adopted to surround the part to be heated appear here. Usually, all that is needed for such a job is a skilled welder and adequate scrap pieces of pipe and plate steel. Here two



sizes of scrap pipe welded together as a hollow cylinder with a quarter-inch pipe inlet and outlet at top and bottom forms the heater for the gauge glass and also for the valve, except that in the latter case grooves must be supplied to permit the heater to fit over the service piping. Exhaust steam should be used and the small amount needed usually does not necessitate an elaborate water draining system. This idea was presented before the 1936 meeting of the Natural Gasoline Association of America, Tulsa, Okla., as an "Operating Kink."

Portable Slush Pit for Townlot Drilling

One large drilling contractor operating near Houston, Tex., has realized quite a savings in drilling muds by using portable, galvanized-steel mud pits. The pits are made up of a series of 10-foot sections, bolted together with a baffle plate in the center of each section. The pit shown here is being used on a line location where the property owners would not allow pits to be dug. This type of slush pit is also adaptable to townlot drilling or where the ground formations are porous and allow a great amount of mud to seep into the ground.



Secondary Fault Found Present in Pennsylvania Gas Field

By T. P. SANDERS

In the Farmington gas field of Tioga County, Pennsylvania, the Potter Development Co. recently completed their No. 1 William Petticrew well for an initial production of 22,500,000 feet of gas per day. The well is located on a secondary high, situated south of the main reservoir of the Farmington field, with its trend parallel to that of the main field. It is on the same trend as the wells of the Meeker area, several miles to the northeast, and serves to prove the presence of a secondary or minor fault to the south of this trend. The major fault lies between this secondary high and the main structure of the field.

The typical structure of gas fields of southern New York and northern Pennsylvania is an anticline with a gentle dip to the north and a steeper dip to the south with a fault on the south flank which may or may not pass into an overturned fold to the east and west. The field high in each case is a short distance to the north of the fault line. The Farmington field, Wayne-Dundee field, Rathbone field, Hebron field, and others are of this type. The presence of a secondary fault and corresponding structure to the south of the main structure of the Farmington field strongly suggests that this same geologic condition exists in all other Oriskany gas fields situated on the north flank of the Appalachian geosyncline. The presence of a secondary fault to the south has already been discovered in the Hebron gas field, in Hebron Township, Potter County, Pennsylvania.

No. 1 Petticrew was completed on September 10 at a depth of 4,285 feet, which was approximately the depth of the top of the Oriskany sand. Because of high gas pressure only a few inches of the sand was drilled, since it was necessary to remove the tools from the well immediately.

Another location has now been made nearby on the Mann farm by New York State Natural Gas Co. The development on this minor structure will be slow, since the reservoir is small, and many dry holes have been drilled in the immediate vicinity. The importance of the Petticrew well lies mainly in the fact that it has established the character of the structure on which it and the Meeker wells are located, indicated the probability of similar structures in other fields, and points to the possibility of a third structure and fault to the south of this structure. The crest of the secondary high on which the Petticrew well is located is about 300 feet lower than the field's main high, and apparently has a closure of about 70 feet while the closure around the major structure is about 250 feet.

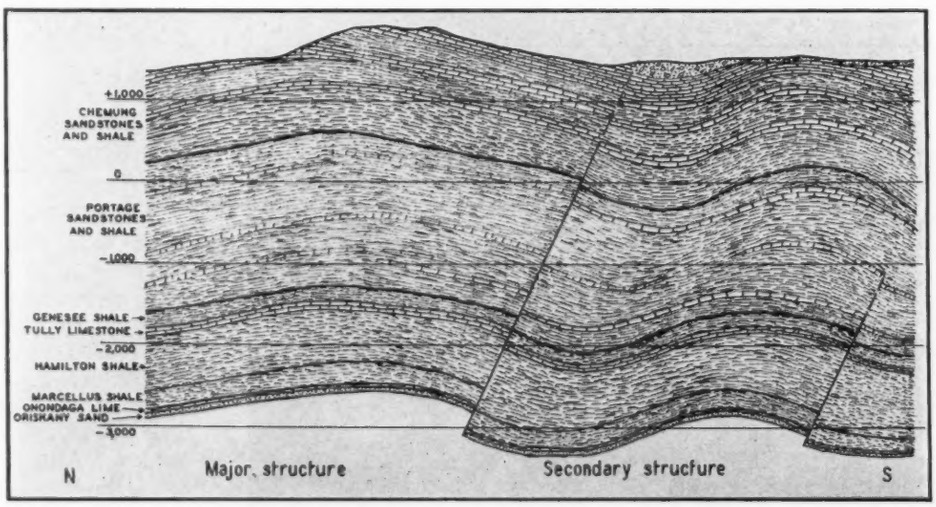
The Farmington, or Tioga County, field is situated on the Sabinsville anticline, which is one of a series of large and rather gentle folds on the north flank of the Appalachian geosyncline. The folds are the result of the Appalachian revolution at the close of the Paleozoic which also formed the more intense folds of the Appalachian mountains to the southeast. The faults on the south flanks of these folds are of the same age as the folding, and occurred where folding was insufficient to take up the stresses. From this region of gentle folds on the north flank of the geosyncline much of the oil and natural gas of Pennsylvania and West Virginia and all of that in New York have been produced.

The Farmington field was developed in 1930. The fifth well drilled was the Meeker No. 1, believed to be the biggest gas well ever completed east of the Mississippi. Its initial production was 100,000,000 feet per day and the original reservoir pressure was about 2,400 pounds. Between this well and the Boom area on the main part of the field a dry hole was drilled, later explained by the fact that the major fault passes between the Meeker and Boom areas and the Meeker area is on the secondary high. The Petticrew well clarifies the position and reveals additional productive acreage on this secondary trend.

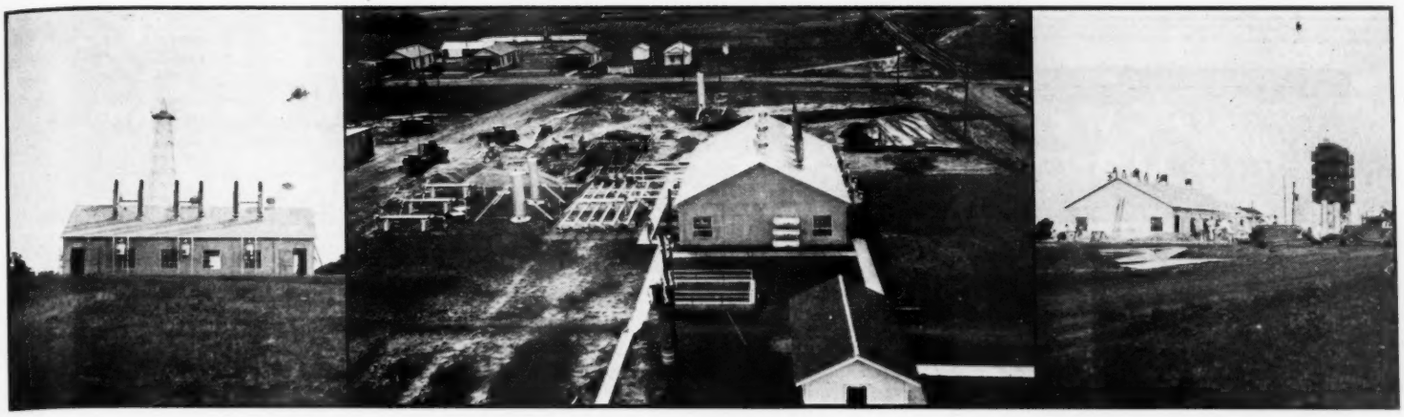
The wildcat operations of the eastern fields are now confined in a large part to the Oriskany sand, which is the productive formation of the southern New York and northern Pennsylvania gas fields. This sand appears on the surface along the northern boundary of the Finger Lakes region of New York and dips to a great depth toward the center of the Appalachian geosyncline. Wildcat wells are being drilled in Pennsylvania and West Virginia with the Oriskany as the objective where its depth is greater than 7,000 feet. Most operators believe that the future of the oil and gas producing industries in the eastern fields depends on the success of these wildcat tests to the Oriskany and deeper horizons. There are extensive areas where these sands, lying at a considerable depth, have never been explored. Sands and limestones, famous for their productivity in other sections of the United States, are known to exist in this section. The St. Peter sandstone, which is correlated with the Wilcox sand of the southwest, lies below the Oriskany sand in the Appalachian basin with an interval between the two sands where other possible producing strata may exist. While the discovery of new productive areas in the east have become rare, the possibilities are by no means exhausted. In the shallower producing sands over a large portion of the eastern fields, oil and gas are localized due to porosity, water conditions, and lenticular beds, more than to structure. In the Oriskany and deeper sands it seems that structure has played an important role in accumulation of oil and gas, since these are "blanket" sands. This accounts for the extensive use of geologic and geophysical survey work.

Outside view of a central pumping station showing many of the rod lines radiating to 33 wells

Central pumping unit under construction. The bandwheel is set at an angle of 25 degrees



Generalized north-south section through the Farmington gas field of Tioga County, Pennsylvania, showing the major and secondary structures and the relative positions of the formations



Three views of E. H. Moore's compressor plant under construction on the Craddock lease in the Fitts field

Electrical Equipment Installed to Pump Wells in Fitts Field

By L. G. E. BIGNELL

Modern methods were used to discover and develop the oil in Fitts field, Pontotoc County, Oklahoma, and one company, at least, will use modern methods to produce the gas and oil from its wells. E. H. Moore, Inc., the largest operator in this field, is now building an electric generating plant upon the Craddock lease in SW quarter of section 29-2-7 to be used later to furnish power to pump the 130 or more wells owned by E. H. Moore in this area. This decision to place the wells upon the pump without any intermediate period between flowing and mechanical production devoted to gas lift was reached after careful study by the production department.

PRESSURE CONTROL METHOD USED

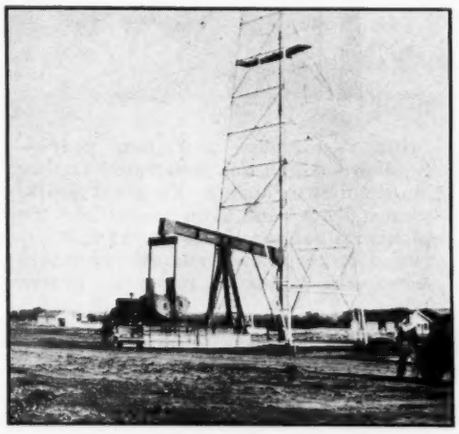
The drilling of wells in this field by E. H. Moore, Inc., has been done for some time using pressure control methods of completion. All wells in the field have been drilled with heavy rotary outfits and to protect the producing formations and secure largest ultimate recovery by flowing this company adapted the pressure control method of completing its wells 18 months ago. After it was decided to use this method of completion exclusively the company erected a gas engine-driven compressor plant in section 29-2-7, the same site as chosen for the new generating plant, and has been delivering gas compressed to either 225 pounds per square inch for fuel for drilling and for other lease purposes, or gas at 800 pounds per square inch for well completion by pressure control for the last 6 months. During this time about 40 new wells have been completed on the E. H. Moore leases in this field.

The compressor plant was an inovation for well completion operations. While not built exclusively for this purpose the compressors were so equipped that they could deliver as much as 4,500,000 feet of gas at 800 pounds pressure at the plant into a gas distributing system extending through the heart of the Fitts pool for a distance of about 3 miles. This gas distributing system is made up of 6-, 4-, 3- and 2-inch pipe, the larger diameter pipe forming the trunk line with the smaller lines branching off to the various leases to be served in accordance with demand on each.

While some gas was available for fuel for drilling rig boilers there was not enough to supply the full demand at the pressures necessary. This led to the installation of three twin Cooper-Bessemer gas engine-driven compressors, each rated at 250 horsepower at 200 r.p.m. The 225-pound pressure is needed for distribution and firing the boilers. The 800-pound pressure gas is needed to "kick-off" some wells. This is the limit of the uses of gas to be made on any of the E. H. Moore, Inc., wells in the Fitts field, for when the wells will no longer respond to "kick-off" and natural flow they will be put on the pump.

Having this central plant installed it was decided to place along side of it the new electric generating unit to consist of three 250-kilowatt 4,160-volt alternating current generators, each direct driven by a 400 horsepower at 400 r.p.m. eight-cylinder vertical type late model Cooper-Bessemer gas engine. While these engines will be operated on natural gas when first installed it is possible to later convert them to oil-burning diesels if desired.

The 4,160-volt current generated in this plant is to be distributed to all leases through a distributing system and step-down transformers will be set at points where the current is to be used.



One of the pumping units in the Fitts pool to be replaced with electrical equipment

Copper wires will be strung on wooden poles and the current delivered from the bus board at the station in the usual manner. Underground conducts will be used for carrying all wires through the generating plant.

For cooling the gas engines on the compressors a raw water system has been installed consisting of a 1,600-bbl. wooden tank for receiving the water after it has been sprayed over a cooling tower. The cooling tower is to be increased in size to give added capacity to furnish cold raw water for the combined electric generating and gas compressing plant engines but the cooling water for the cylinders of all of these engines will be handled in a closed system hereafter.

AMPLE COOLING CAPACITY

This cooling system will consist of modern heat exchangers with ample capacity to handle sufficient water for the six engines in use and others as added later. The water to be cooled will circulate outside the coils in the heat exchangers while the cool, raw water will pass through the cooling coils and be circulated back to the cooling tower and then to the 1,600-bbl. storage tank. The raw water system capacity when complete will be about 1,750 gallons of water per minute.

Looking forward to the time when the need for compressors may be less, the plant is being so designed as to permit the gas engines on the compressors to be later converted so as to operate additional electric generators. All accessory plants for this new installation are being planned with this possible additional service in mind and it will therefore be possible to furnish adequate power for as many wells as may ultimately be completed on the Fitts pool leases operated by E. H. Moore, Inc.

The new building being erected to house the generating equipment is 48 by 36 feet outside dimensions and is of structural steel construction. Foundations and floors are of concrete. There is a gable room at the back of this main building 24 feet long by 8 feet wide to accommodate switch panels.

The building being erected to house the circulating pumps for the raw water system, the cooling water system, and the water sump and lubricating oil storage rooms will also be of steel

construction and 18 by 36 feet dimensions. This building will also be erected upon concrete foundation with floors and pits of the same material.

All water, gas and oil lines about the plant site and through the buildings will be buried either in ditches in the concrete or in the ground where easily accessible. The two main power plant buildings are set end to end and the floor elevations have been adjusted so if it is necessary the two buildings can be connected to form one structure without changes other than removing the ends of each building and adding the necessary material to complete the steel structures.

The entire plant is in an enclosed site about 450 feet long by 250 feet wide with fences, concrete walks, landscaped grounds and trees, shrubs and lawn. All buildings are painted aluminum.

It is proposed to install individual electric motor-driven pumping units at each well as soon as it becomes necessary to produce them mechanically. This work will be carried on systematically but the pumping units may actually be in place before really needed to avoid any shut-down period after the well ceases to flow naturally. The pumping units will be gear driven by electric motors rated at from 15 to 25 horsepower at first, but later it may be necessary to power some units with 40-horsepower pumping motors. The pumping units will not be used to service the wells for they will pull rods and tubing with portable winches powered with internal combusion engines mounted upon truck or tractors.

It is possible that at some time later date connections will be provided at each pumping derrick for a portable electric motor pulling unit. The pumping derricks are 84 feet high, as the 122-foot heavy drilling rigs are removed as soon as the wells are completed. At this time clean-out units are not needed for any of these wells but later some portable type outfit will be secured for this work.

This whole system indicates the trend of modern engineering as applied to gas and oil production. This field is a good example of what can be done by cooperation between operators and every method is being employed to conserve natural reservoir energy and when it is believed that it is better practice to lift the oil from the bottom of the hole by mechanical means, rather than use natural energy for this purpose, E. H. Moore, Inc., will be ready to start pumping its wells.

Metal Specifications Approved

At the recent meeting at A.S.T.M. headquarters of Committee E-10 on Standards there were approved for publication as tentative a number of new specifications recommended by A.S.T.M. committees functioning in the ferrous metals field. Four of the new specifications were developed and approved by Committee A-1 on Steel. These cover high-strength rivet steel (A 195), seamless steel boiler tubes and super heater tubes for high-pressure service (A 192), alloy-steel bolting materials for high-pressure at temperatures up to 1,100° F. (A 193) and nuts for bolts for high-pressure and high-temperature service to 1,100° F. (A 194).

The new specifications covering seamless steel boiler tubes (A 192) provide for more rigorous and more numerous tests than in existing A.S.T.M. Standard (A 83) covering lapwelded and seamless steel and lapwelded iron boiler tubes. The specifications cover boiler tubes and super heater tubes 2 inches in outside diameter or larger and heavier than .203 minimum wall thickness.

The new alloy-steel bolting material specifications for high-pressure and high-temperature service to 1,100° F. (A 193) cover five classes of materials: A, B, C, D and E, Class E being an austenitic steel. While composition of the steel is to be agreed upon by the manufacturer and the purchaser, it may be selected from five steels listed in the body of the specifications which provide definite compositions. These steels are of the following types: Nickel-chromium-molybdenum, 4-6 per cent chromium, chromium-molybdenum, tungsten-chromium-vanadium, and tungsten-chromium.

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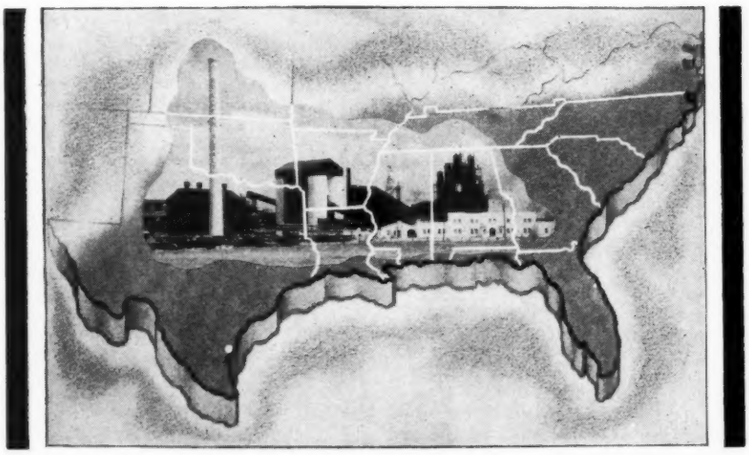

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QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Excess Sulfur in Gasoline May Cause Cloudy Condition

When certain high sulfur straight-run and cracked gasolines are exposed to direct sunlight there is a tendency to develop a haze followed by a cloud. This has been explained as due to the presence of disulfides and free sulfur. Is there a method of inhibiting or preventing this formation?—L. W. C.

There are several different conditions that may be responsible for the formation of a haze or cloud in finished gasoline when exposed to direct sunlight. In most instances sulfur is involved. The forms of sulfur that have been identified in gasoline include, free sulfur, mercaptans, alkyl sulfides, disulfides, thiophenes, hydrogen sulfides, carbon disulfide, alkyl sulfides, and sulfuric acids.

When purifying gasoline stocks by the conventional sweetening operation, it is easy to add too much sulfur. The ordinary specification limits the total sulfur content of motor gasoline to 0.10 per cent. Free sulfur introduced in the form of brimstone, is soluble in the usual gasoline at normal temperatures, to the extent of approximately 0.40 per cent; slightly more in heavy gasolines. Most refiners have established a very rigid inspection service to prevent over-sulfuring. Free sulfur will often cause gasoline to go off color, to become cloudy and sometimes quite milky.

Among the reasons for the action of sulfur in gasoline are the fact that the gasoline may be sweetened at a temperature slightly above normal, and thus dissolve extra sulfur which separates when the gasoline is cooled. Probably a more common cause of cloudy gasoline is the decomposition, or oxidation, of sulfur compounds, usually accompanied with the formation of acid, which in turn causes the precipitation of sulfur as a haze, cloudy, or milky coloring. There are several color inhibitors now available, but their use is especially recommended for delaying or preventing the formation of yellow to brown colors that so often form in gasoline which is in storage. The preferred practice for the control of sulfur is to eliminate this material during the treating operation.

When a gasoline stock is found to be over sulfured it is the practice to blend it with an unsweetened stock. The proportions being determined by trial in the laboratory. In some refineries a supply of sour stock containing mercaptans is held for use in correcting any finished gasoline that is found to contain free sulfur. Sometimes it is necessary to make the blend with a sour distillate and then resweeten with plumbite solution.

Naphthenic or Organic Acids Source of Corrosion

Do you have any information covering the corrosion of stills, towers, etc., from other causes that sulfur, especially when cracking low sulfur napthene base oil?—G. K. D.

Several investigations have directed attention to corrosion of refinery equipment caused by the presence of naphthenic acids or organic acids in the oil processed. R. L. Marek, United States Bureau of Mines, has mentioned the discovery of Vuiborova that naphthenic acids in the Russian oil of Maikop were the cause of the corrosion of refinery equipment when refining that oil and not the sulfur compounds. The corrosion of lubricating-oil and asphalt-distilling equipment when charging a 15 A.P.I. gravity California crude oil, containing 1 per cent sulfur, 2 per cent water, with no magnesium chloride, was found by Blount to be due almost entirely to naphthenic or organic acids. This corrosion started at the furnace, outlet temperature 725° F., and extended to the outlet, temperature 495° F., of the rectifier.

Naphthenic acid corrosion is most active at high temperatures, especially in the presence of water-free oil condensates. Therefore, a large part of the localized corrosion found in cracking equipment where the operating temperature is about 725° F., may be entirely due to naphthenic acids.

The quotation following is by Marek. "Additional evidence that localized corrosion of cracking equipment may be due to naphthenic acids was found at a refinery processing a 10 gravity A.P.I. stock containing about 1.3 per cent sulfur. Sections cut from a certain group of tubes facing the radiant heat section of the furnace firebox showed extremely severe localized corrosion of the bottom and sides of the tubes. A cross-sectional view of the center of one of the roof tubes evinced the results of severe localized corrosion, a channel along the bottom of the tube. The shape of the channel suggests that it may have resulted from the action of a small stream of strong acid. Corrosion of the tubes probably was not due to erosion because the vapor velocities in the tubes were comparatively low; moreover, it could not have been due to hydrochloric acid or hydrogen sulfide because the tubes were operated at temperatures well above the vaporization point of water. The top of the tube showed a loss of only 4 per cent from the original wall thickness, whereas the bottom of the tube facing the radiant heat section of the firebox sustained a loss of 95 per cent. The pronounced thinning of the walls at the bottom of the tube, however, occurred only in the portion exposed to the radiant heat of the firebox and was less at the ends, which were not so exposed."

References: R. L. Marek, U. S. Bureau of Mines, Tech. Paper 551, 1933. A. L. Blount, Proc. A.P.I. Refining 11, No. 75, Dec. 31, 1930, p. 102.

SPECIFICATIONS

Lubricating Oil Class D or S.A.E.

PART 4

TABLE 3b.

S.A.E. No.	Darkest A.S.T.M. color No. Pass/credit	Max. A.S.T.M. carbon residue % Pass/credit
20	7½/5	0.60/0.10
30	8/0	.80/.15
40	6 dil/7	1.00/.25
50	7 dil/7	1.40/.40
60	8 dil/8	1.70/.70
70	8 dil/8	2/1

Color. Shall not be darker than the value given for passing on Table 3b. One credit will be allowed if not darker than the appropriate darkest color for credit given in Table 3b.

Carbon residue. Shall not be higher than passing value in Table 3b. One credit allowed if the c.r. is not higher than the appropriate max. value given in Table 3b.

Reference: Federal Standard Stock Catalog, Sec. 4, Part 5. VV-O-496.

New Specifications for United States Government Motor Gasoline

I am informed that a new specification for U. S. Motor Gasoline has been issued. Will you indicate what changes have been made and when they become legal?—E. C. S.

The federal specification for United States government gasoline, designation VV-G-101, has been revised to become effective not later than Nov. 15, 1936. The new designation is VV-G-101a.

The revision has been confined to certain details concerning vapor pressure. The other requirements remain unchanged. The specifications for VV-G-101 were published in outline on this page in the issue of April 2, 1936.

The maximum of 12 pounds vapor pressure remains for the gasoline required for use under ordinary conditions; the changes are in Footnotes 3, 4 and 5 as follows:

"3. When vapor pressure measurements are made on samples taken at the refinery or from tank cars, barges, or bulk storage, an additional 1 lb./in.^{2} in vapor pressure shall be allowed.

"4. The government reserves the right to reject material (a) in those localties where the normal mean minimum temperature during the month of January is greater than 27° F. if the vapor pressure at 100° F. exceeds 10 lb./in.^{2}; (b) during the months of June, July, August, and September if the vapor pressure at 100° F. exceeds 8 lb./in.^{2}. These reservation limits shall be raised 1 lb./in.^{2} if note 3 is applicable.

"5. Departments purchasing gasoline for use in tropical areas (23½° north latiture to 23½° south latitude) require a vapor pressure not in excess of 8 lb./in.^{2} throughout the year, regardless of note 3."

Clear and Clear-Blending Value in Relation to Octane Rating

What is the meaning of "clear" and "clear-blending value", as used in the article by Buc and Aldrin, "A New High Octane Blending Agent," in The Oil and Gas Journal, June 18, 1936, page 41, and especially in Tables 3 and 4?—F. H. A.

It is well known that the knock inhibitors and gasolines of different origin do not give the same results under similar conditions. The response of the blending agents discussed by Buc and Aldrin, in the article cited, apparently varies with the quantity; that is, the results obtained are not in proportion to quantity used. This condition has been recognized in many instances, both with respect to the knock inhibitor and the fuel. An increase in octane number is not always in direct ratio to the quantity of tetraethyl lead added to the same gasoline, and different gasolines do not respond in the same way when modified with the same quantity of lead. This property is described under the term susceptibility.

The use of the word clear, by Buc and Aldrin, is to indicate that the octane number reported is that of the material without the addition of lead. Clear-blending value of blending agent refers to the calculated blending octane number of the blending agent alone, without the addition of lead. An example will explain this:

Suppose the blend is 40 per cent isopropyl ether in Reference Fuel C-9, as reported in the tables. The octane number of C-9 alone is 74.8 and 60 per cent of this is 44.8; then 88.3 minus 44.8 leaves 43.5; this divided by 0.4 equals 109; which is the blending octane number of isopropyl ether.

PROBLEMS FROM READERS

Edited by L. G. E. Bignell

What Is the Best Way to Shoot a Berea Grit Sand Well?

I am interested in articles published in your column on the subject of shooting oil and gas wells. I would like some advice on how best to handle some Berea Grit sand gas wells I own in Ohio. The actual pay sand varies from 5 to 8 feet and comes in the upper portion of the main 42-foot thick sand body. The pay sand is very close and consequently the gas volume is small. The depth of the hole is about 600 feet and the distance from bottom of casing to shot is around 110 feet. The diameter of the drilled hole is 4⅞ inches. I have in mind to drill about 10 feet below the pay, placing the shot there and extend it up into the actual pay zone possibly one-third or one-half way. What would be your recommendations?—D. B. McC.

With reference to the particular conditions you describe the following general course of procedure is recommended, though you, of course, appreciate that these recommendations, being made from this distance cannot be specific. In shooting gas wells where the producing formation is a sand, it is generally found—that the shot makes the well—and the record shows that this is quite true of the Berea sand.

As we understand your letter, your pay sand is 42 feet in thickness with maximum saturation in the upper 8 feet and that you contemplate drilling an additional 10 feet of hole in which to set a 15- to 20-quart shot which will extend from the bottom to a height midway in the 42-foot pay sand and which would therefore require approximately 26 feet of 2-inch shells or about two-thirds quart per foot of hole.

This is what is commonly known as a squib shot such as is often used to brush the walls of the hole to remove drilling mud, paraffin or other pore-scaling mediums. To brush the walls of the hole is about all that can be reasonably expected from that kind of shot as the quartage per foot of hole is small, therefore of necessity the pressure of explosion per unit of wall area must be small. In this connection, it is well to have in mind the fact that the total pressure developed by a shot of any size is a factor of less importance than the pressure per unit of explosion contact. This means, in other words, that 20 quarts in 10 feet of hole will be several times as effective as the same number of quarts stretched out over 20 feet of hole, or to express it still more clearly, 20 quarts contained in a 4-inch shell will exert four times as much pressure per unit of wall area as would be the case if it were contained in a 2-inch shell, as a 4-inch shell contains four times as much explosive per linear foot.

Your statement as to why you proposed to deepen well 10 feet below present pay is not clear unless you hope thereby to tap more pay; however, if that is not the case we would advise against deepening. In any event, set the shot on bottom and do not use anchor.

You will get best results if you will use whatever quartage you decide upon in the largest diameter shells that will safely go to bottom, regardless of where that may place the top of the shot in relation to the top of the pay. However, the quartage requirement for best results would be 60 quarts contained in 3½-inch shells. This would give you 31 feet of shot, and would leave 121 feet of open hole. On top of this shot a time bomb should be placed with a setting of not less than 11 hours. Immediately on top of the bomb, set a bridge and then slowly and carefully place 100 feet of good, clean, coarse, damp sand in the hole, taking care to avoid bridging and to avoid undue haste, also avoid running tools or bailer into hole while sanding. If necessary, to measure, use a measuring line.

While an electric squib can be used in shallow wells where liquid stemming is used we recommend the use of a time bomb where solid stemming is used.

Volumetric Shrinkage of Oil to Be Deducted for East Texas

In answering one of your readers it is stated that the volumetric shrinkage of oil in the Fitts field, Oklahoma, is about 15.9 per cent. Do you have similar figures for oil from the East Texas oil field?—H. H.

If you will refer to an article published on page 38 of The Oil and Gas Journal of June 11 on the East Texas field you will note in the statistical table that this factor has been given as 21 per cent.

In a paper prepared by C. E. Reistle, Jr., and E. P. Hayes of the U. S. Bureau of Mines and published as R. I. 3211 Mr. Reistle gives the shrinkage factor as 16.9 per cent.

In another paper prepared by Ben E. Lindsly also of the Bureau of Mines and released as R. I. 3212 it is stated that the total shrinkage by differential liberation at 146° F. and total shrinkage by flash liberation at 90° F. are 20.6 and 20.8 per cent, respectively.

The difference between these two estimates is accounted for by the fact that Mr. Reistle calculated that there was 301 cubic feet of gas produced with each barrel of oil, whereas Mr. Lindsly based his figures upon the liberation of 357 and 368 cubic feet per barrel of oil, respectively.

Since the U. S. Bureau of Mines work was done there has been considerable additional work done and the shrinkage factor now usually used is 21 per cent.

WHY THEY CALLED IT *Fishing Tools*

Oil-field fishing tools are so called because they perform much the same service that rod and line do in lake and stream, to-wit: they catch the fish. (Any piece of equipment which the operator tries to recover from the well hole is a "fish.") One of the most interesting things about the bronchoscope, with which poker chips, safety razor blades, false teeth, jewelry, etc., have been removed from human interiors is that the idea for its development was found in the oil country. When a young man in Pennsylvania, Dr. Chevalier Jackson looked down well holes hundreds of feet deep for lost tools. He applied to the job of recovering miscellaneous objects which accidentally slid down the human gullet the same principles utilized in bringing lost tools from the well hole, and he became world famous.

Why Are Tannic Acid and Caustic Soda Used in Drilling Mud?

In an article published in The Oil and Gas Journal, written by Neil Williams, on "Special Precautions Used in Gulf Field to Avoid Blowouts" reference is made to tannic acid and caustic soda being used to control the consistency of mud. I would very much appreciate further information as to just what the effect of this mixture is on the mud.—A. E. C.

While your question is a natural one its answer is somewhat involved because it deals with colloidal chemistry. To get a good background to this general problem of drilling muds we suggest you read a paper by W. K. Lewis, Lombard Squires and W. I. Thompson published in the October 25, 1934, issue of The Oil and Gas Journal. Also a paper by W. V. Vietti, in the June 6, 1935, issue of The Oil and Gas Journal.

In general it may be stated that chemists and engineers who have been working with drilling muds have found that the control of viscosity is very essential. This property in muds tends to make for a uniform mixture. In fighting heaving shales it is very necessary that the mud properties be maintained after the mud reaches the bottom of the hole and one of the characteristics desired is uniform colloid suspension. This result is secured by control of the pH or hydrogen-ion concentration usually on the alkaline side.

Caustic soda or sodium hydroxide will increase alkalinity and is used for this purpose. The addition of tannic acid, while commonly practiced, gives results not so easily explained. It is used to influence the character of the surface of the minute particles making up the solid portion of the mud mixture. Lewis states, "Thus, a clay whose yield point has been brought down by adjusting the pH to a value of 11 can be still further reduced by the addition of tannic acid. The mechanism of this effect has not been demonstrated. It may be due to the conversion of a calcium or magnesium clay to a sodium type by precipitation of the alkaline metal as tannate.

"It seems probable that a more important factor is the absorption of tannic acid on the surface of a clay particle as a protective colloid. It is not improbable that the mechanism of this absorption is the combination of the tannic acid with the clay surface through a bridge of devalent metal ion.

"Whatever the mechanism of this absorption, the protective colloid on the surface greatly reduces the effect of the attractive forces, and consequently tendency to particle adhesion, resulting in almost complete disappearance of yield point."

What Is a "Wildcat" Well?

Please give me a complete and detailed explanation of the term "wildcat well," as it is used in the oil fields.—B. L.

A hole drilled in prospecting for gas or oil, located more than 1 mile from proven productive territory is now generally accepted by the oil industry as a "wildcat."

In general, this term has always been used in the industry to indicate that a test, whether productive or not, drilled at some distance from proven territory was a "wildcat" and the term probably originated in the early days in the east when prospects were often started at some distance from the known fields and this term "wildcat" was in common use meaning "unsafe and unsound."

The term is applied to a test regardless of the results. In other words a "wildcat" test may be productive or dry, but if located away from proven production it is known as a "wildcat."

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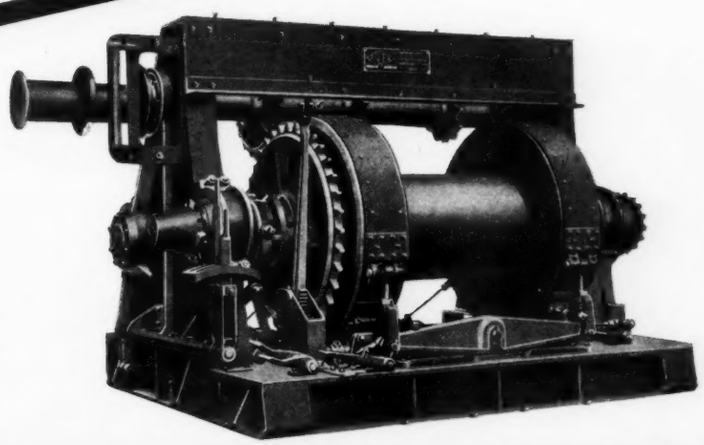

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FIELD OPERATIONS

Summarizing the Week's Developments

A decline of 97 in completed wells compared with the previous week was the record of the United States this week. Three hundred and thirty-one oil wells were included in the 441 completions.

Southern Rice County, Kansas, has a new pool opened in section 5-21-7w, 2½ miles northwest of the prolific Hauschild pool. The discovery well's production was variously estimated between 2,500 and 5,000 barrels per day. It had not been given a potential test. The pay is Conglomerate at 3,529-37 feet. The Schartz sector of the Silica pool in Rice County was extended.

OKLAHOMA

Wildcatters in Oklahoma have taken on new life and tests have been started in Latimer, Tillman, Love, Noble, Seminole and Garfield counties. Two wells in the Crescent field in Logan County showed big production, one of them being rated at 25,772 barrels of oil and 48,000,000 feet of gas per day on the strength of its six-hour test, and the other having flowed 1,085 barrels in a one-hour test. It had not yet had a potential test.

TEXAS

In Gulf Coastal Texas the Amelia field has a north extension opened in the past week at 6,107 feet with a well that started at 13 barrels per hour. The south extension of the Dickinson field was again extended. The Lafitte field in Coastal Louisiana regained its distinction of having the deepest producing well in the world, lost to it a few weeks when the distinction went to Coastal Texas. The Lafitte deep producer is good for 475 barrels per day at a total depth of 9,974 feet, the well producing through a twenty-one-sixty-fourths-inch choke. In Southwest Texas there were indications of a new pool in Nueces County, 4½ miles south of the Agua Dulce gas field.

In West Texas the well of the week is a wildcat in Cochran County, one of the northern tier of counties which separate the Panhandle from the West Texas area. The well has 1,800 feet of oil in the hole, but little can be known of it until casing has been set, the hole cleaned out and a production test made.

The Talco pool in Titus and Franklin counties now has a pipe line outlet. Humble Pipe Line Company has begun shipping oil from the field and another pipe line to serve the Sulphur Bluff and Talco pools is being considered by American Liberty Pipe Line Company.

LOUISIANA-TEXAS

In an otherwise quiet week in the North Louisiana fields an outpost in the Rodessa area, not far west of the town of Ida, showed gas and distillate on a drill stem test in the Glen Rose section of the Trinity series reviving hope that the Rodessa field in North Louisiana and Texas will reach that far northeasterly. Rodessa produced 71,800 barrels per day last week. The daily per-well allowable in October has been cut to 225 barrels.

ORISKANY SAND GASSERS

The largest gas well in West Virginia was completed in Kanawha County in the past week. It was good for 15,000,000 feet per day, from Oriskany sand. A 32,000,000-foot gasser was completed in Potter County, Pennsylvania, also in the Oriskany sand. The wells are about 330 miles apart, air line.

ROCKY MOUNTAIN FIELDS

A 7,488-barrel well in the Monument field featured the Lea County, New Mexico, news of the week. In Montana, the Cut Bank field again has pipe line outlet for all its production.

Completions in All Fields

(Week Ending October 3, 1936)

	Oil	Gas	Dry	Total	1936 total comp. to date	1935 total comp. to date
Penna. Grade Fields	49	20	8	77	2,539	2,230
Lima Field	4	0	0	4	72	75
Central Ohio	1	5	7	13	272	250
Indiana	0	0	0	0	134	156
Illinois	0	0	0	0	26	11
Michigan	9	1	7	17	478	394
Kentucky	2	0	1	3	207	189
Kansas	15	0	4	19	1,237	949
Oklahoma	25	1	6	32	1,879	1,531
North Central Texas	20	0	11	31	1,901	2,013
West Texas	28	0	3	31	1,145	616
Texas Panhandle	9	2	0	11	501	548
East Central Texas	9	0	2	11	268	189
East Texas	37	0	1	38	1,956	3,459
East Texas border	3	0	0	3	72	8
Gulf Coast Texas	15	0	3	18	883	796
Southwest Texas	55	2	14	71	2,224	1,172
Total Texas	176	4	34	214	8,950	8,801
North Louisiana	14	0	1	15	492	239
Gulf Coast Louisiana	8	0	3	11	278	274
Total Louisiana	22	0	4	26	770	513
Arkansas	0	0	1	1	71	98
Montana	2	0	0	2	172	137
Wyoming	1	1	0	2	75	64
Colorado	0	0	0	0	21	12
New Mexico	11	0	0	11	448	250
Utah	0	0	0	0	5	5
California	14	0	6	20	925	862
Total United States	331	32	78	441	18,281	16,527
Total previous week	397	49	92	538		
Difference	66	17	24	97		

Outstanding Fields—Highlights

(Week Ending October 3, 1936)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Anahuac	2	7	1	600	112	7,739
Hastings	4	7	0	0	94	5,937
Loma Novia	3	6	8	1,880	589	15,543
Seven Sisters	3	7	7	2,790	289	7,430
Saxet Heights	4	10	5	495	173	8,050
Saxet	4	27	10	1,675	228	18,510
Lopez	2	8	3	1,225	180	4,615
East Texas	40	110	37	1,953	21,440	444,036
Talco	19	31	4	338	71	7,304
OKLAHOMA						
Oklahoma City (capitol area)	5	14	2	12,551	148	39,500
Oklahoma City (old field)	0	0	0	0	947	92,450
Fitts	13	49	5	2,196	445	58,500
Burbank-So. Burbank	0	10	2	554	2,164	22,200
KANSAS						
Ellis County	2	33	0	0	52	2,886
Reno County	3	27	0	0	323	15,962
Russell County	8	34	3	5,962	476	18,039
Rice County	8	30	5	4,609	598	35,617
NEW MEXICO						
Lea County	15	73	9	20,208	433	75,420
LOUISIANA-TEXAS						
Rodessa, La.	4	28	11	8,018	294	56,385
Rodessa, Tex.	5	36	3	1,959	64	15,415
Gillis, La.	2	5	1	300	53	17,210
Tepetate, La.	1	3	1	234	31	5,914
MICHIGAN						
Porter-Yost	8	8	5	585	406	14,970
Crystal-Montcalm	7	9	1	50	141	4,290

Texas and Louisiana Gulf

By
F. L. SINGLETON

EXTEND AMELIA NORTHERLY; LAFITTE'S NEW DEEP RECORD

HOUSTON, Tex., Oct. 5.—Opening the first oil production at the north extension area of the Amelia field, northern Jefferson County, together with the establishment of a deep producing record from a new sand at the Lafitte field in Coastal Louisiana were the featured developments along the Gulf Coast the past week.

Glen H. McCarthy No. 2-A Longe, located in the H. Williams Survey approximately 2½ miles north of the Amelia field, Jefferson County, was completed through perforated casing in sand bottomed at 6,107 feet, for an initial production of 13 bbls. of 29 gravity oil per hour through a quarter-inch choke with tubing pressure 2,100 pounds and casing pressure 2,400 pounds. With 7-inch casing cemented at 6,105 feet, the well was originally tested through perforated casing from 6,087-99 feet where it tested 400 pounds of pressure on an 8-minute drill stem test.

No. 2-A Long is producing from the Oligocene sand, about 600 feet above the production to the south which is being developed by Humble Oil & Refining Co. Some are of the opinion that the structure in this area is entirely separate while others believe it to be one large structure with the two areas being divided by faults or "grabens" such as Dickinson, Gillis and a few others.

This is the third test to be drilled on the 100-acre lease which was farmed out by Stanolind Oil & Gas Co. It is north of a distillate producer and southeast of the operator's No. 2 Longe which blew out, caught fire and cratered. The importance of this new area will soon be known by the outcome of two wells that have just spudded in. They are Normandie Oil Co. No. 1 Prutzman to the southeast in the H. Williams Survey and Texas Co. No. 1 Pansy Yount located due west in the A. Houston Survey.

Dickinson Extended

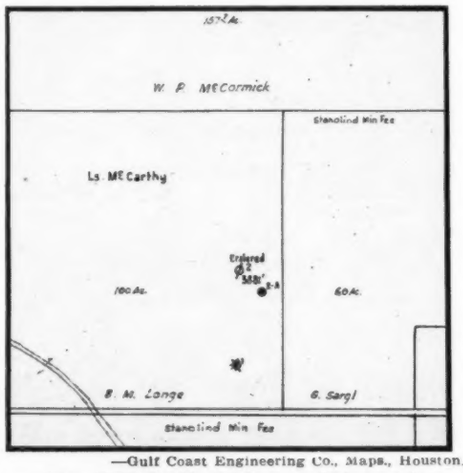
The south extension area of the Dickinson field, Galveston County, was further extended by the completion of Pan American Production Co. No. 1 Louis Craig which was completed for an initial production of 10 bbls. of oil per hour through a quarter-inch choke through casing perforations made at 8,300 feet. It is situated 2,282 feet east of production in the W. K. Wilson Survey. The well was drilled on farmed-out acreage held by the Texas Co. and it is reported that seven more tests will be drilled. To the northwest, Humble Oil & Refining Co. No. 10-A Maco Stewart, topped broken sand showing oil at 8,683 feet and after running an electrical coring test to bottom at 8,707 feet, 7-inch casing was cemented at 8,696 feet. Same company has made location for No. 11-A Stewart located 933 feet northwest of No. 9-A.

The Cotton Lake field, Chambers County, recorded its second abandonment which discourages any plans for any large development program that at first seemed possible. The abandoned hole was Humble Oil & Refining Co. No. 1 Ben Dutton, quit at a total depth of 6,664 feet after coring salt water in the Frio sand from 6,360-70 feet. It is east of McCarthy No. 3 Kilgore that is preparing to make a drill stem test in the top 4 feet of a sand section, cored from 6,338-50 feet which showed oil and salt water. Derrick is being erected for McCarthy No. 4 Kilgore, northeast of the discovery well and Humble Oil & Refining Co. is rigging up No. 1 Howard, a south offset to the discovery.

Wharton County

On the Spanish Camp Prospect, Wharton County, Felmont Oil Corp. No. 1 G. Mitchell was being watched with interest after it tried to blow out while the drill pipe was coming out of the hole to change bits. The gas is thought to be coming from a shallow sand around 3,000 feet, as the operators cored shale with no shows from 5,915-20 feet where the well attempted to blow out. It is coring ahead in shale below 6,109 feet and is showing gas in the drilling mud. This county received its fifth wildcat, by the staking of No. 1 Bard by the Barnett Petroleum Corp. which is located 2½ miles southeast of the town of El Campo in section 4, J. B. Marford Survey. Overflow of the Colorado River has shut down all activity in the Magnet area and the outcome of a second completion test on the discovery well of that area will be held up another week.

The last 24-hour gauge reported from Amerada Petroleum Corp. and others No. 1 Carpenter, the second completion of the Fairbanks field, Harris County, was 291 bbls. of oil and 2,500,000 feet of gas through a quarter-inch choke with working



—Gulf Coast Engineering Co., Maps., Houston.

Glenn McCarthy No. 2-A Longe, which opened oil production in the north extension area of the Amelia field, Jefferson County

pressure on the tubing 2,100 pounds and shut-in casing pressure 2,400 pounds.

In the Hughes field, Victoria County, Portilla Oil Co. No. 2 P. H. Welder located in the Felipe Dimmitt Survey is reported to have cored 10 feet of sand with an oil odor and 5-inch casing has been cemented on bottom at 5,010 feet. Very little information is available on this test and it is not known where the casing will be perforated. No. 2 P. H. Welder was originally completed for an oil well in sand at 4,857 feet, but was deepened after the flow had turned to salt water. Another showing has been encountered in the wildcat being drilled by Plymouth Oil Co. on the J. J. Welder lease, located in the S. A. Baldwin Survey. Sand was topped at 5,884 feet and it is bottomed at 5,903 feet after a drill stem test showed 25 pounds of pressure in 2 minutes.

Three Near Completions

To the northwest in the Heyser field, northwestern Calhoun County, three wells are in the process of completion. In the A. Sisneros Survey, Humble Oil & Refining Co. No. 3-B Welder is making a squeeze-out cement job, after a drill stem test through perforated casing at 5,465-73 feet showed 10 feet of oil and 540 feet of salt water. Same company's No. 4-A Welder in the J. M. Rios Survey was tested through perforated casing from 5,463-68½ feet, but due to the high gas-oil ratio the screen and liner is being pulled and the hole will be deepened. To the north, Portilla Oil Co. No. 1 Welder topped sand at 5,489 feet and on a 15-minute drill stem test from 5,480-94 feet, the total depth, the operators recovered 600 feet of oil with 2,200 pounds of pressure.

At the Manvel field, Burton Drilling Co. No. 1 Cooling located in the A.C.H.&B. Survey No. 92, extended Miocene production approximately 1,500 feet north when it flowed 100 bbls. per day through a quarter-inch choke with tubing pressure 100 pounds. It was completed in 20 feet of oil sand bottomed at 4,060 feet. The rig is being skidded to the south for No. 1 Baldwin, located in the center of Lot 115 in the same survey. Further south in the E. Little Survey, Sterling Oil & Refining Co. is rigging up for No. 1 L. B. Hamilton located north of his No. 1 Yewell in the E. Little Survey.

Burning Well Saved

After burning for about two months, Republic Production Co. and Houston Oil Co. No. 1 Brooks, located on the Silsbee Prospect, northwestern Hardin County, has been extinguished and the well is now dead. The well was killed by pumping water through the company's No. 2 Brooks, a "relief" well located 750 feet from the crated hole. Since the well blew out while a drill stem test was being made from 6,945-6,982 feet, it has been impossible to estimate just how much crude the well was making while burning. Production was coming from the Cockfield sand and the operators are expected to announce another location within the near future. The relief well is bottomed below 7,020 feet.

Another Deepest Producer

The Lafitte field in Acadia Parish, Coastal Louisiana's deepest producing field, was extended 1,800 feet north and recaptured its title of the world's deepest producing field when Texas Co. No. 5 Lafitte was completed in a new sand bottomed at 9,974 feet, for an initial production of 475 bbls. of 42 gravity oil per day through a 21/64-inch choke with tubing pressure 3,160 pounds.

The well is situated north of the company's eight wells that are producing 32 gravity oil from sand at 9,500, 9,400, and 9,600 feet. Oil sands were cored at intervals from 9,876 feet to its total depth which apparently assures the field of production from 10,000 feet. While the bottom of the hole is only 11 feet deeper than No. 1 Armstrong Plantation completed by Harrison and Abercrombie at the Old Ocean field in Brazoria County, 2 weeks ago, No. 5 Lafitte's initial gauge is larger and the gravity of the oil is much lower. In the southern part of the field, the company's No. 5 Rigolettes is drilling below 10,300 feet and has encountered numerous oil and gas sands below the 10,000-foot horizon.

Deep Oil in Jennings

Superior Oil Producing Co. No. 1 Leckett opened deep production for the west flank of the old Jennings field in Acadia Parish when it flowed 278 bbls. of 38 gravity oil the first 12 hours ending at 8 a. m. September 30 through a 11/64-inch choke with tubing pressure 1,225 pounds and shut-in casing pressure 1,350 pounds. Production is from 15 feet of sand bottomed at 6,380 feet. Seven-inch casing was cemented at 6,342 feet. This

(Continued on Page 74)

North Louisiana, Arkansas

By MITCHELL TUCKER

OUTPOST SHOWS DISTILLATE AND GAS IN RODESSA AREA

SHREVEPORT, La., Oct. 5.—Six new locations in the Arkansas-Louisiana-Texas territory in the past week, in contrast to 41 in the previous week, recorded quite a change in activity. Only two locations were made in the Rodessa field last week.

The controversy over rig builders' wage scale during the week is thought to have had a considerable bearing on the small amount of new activity. Meetings are now being held to iron out these difficulties.

The Glen Rose test of the Converse pool continues to be the most plausible field opener, as operators prepare to run casing before testing.

The daily per-well allowable for the Louisiana side of the Rodessa field has again been cut, as the Department of Conservation announced a 225-bbl. maximum for each oil well in October. It is expected that the Texas wells will be likewise restricted, as in the past. The total allowable will remain unchanged at 60,000 bbls. per day, but the per-well allocation was cut to provide for new completions. Remaining North Louisiana fields were allocated 20,000 bbls. daily.

Big Gas Saving

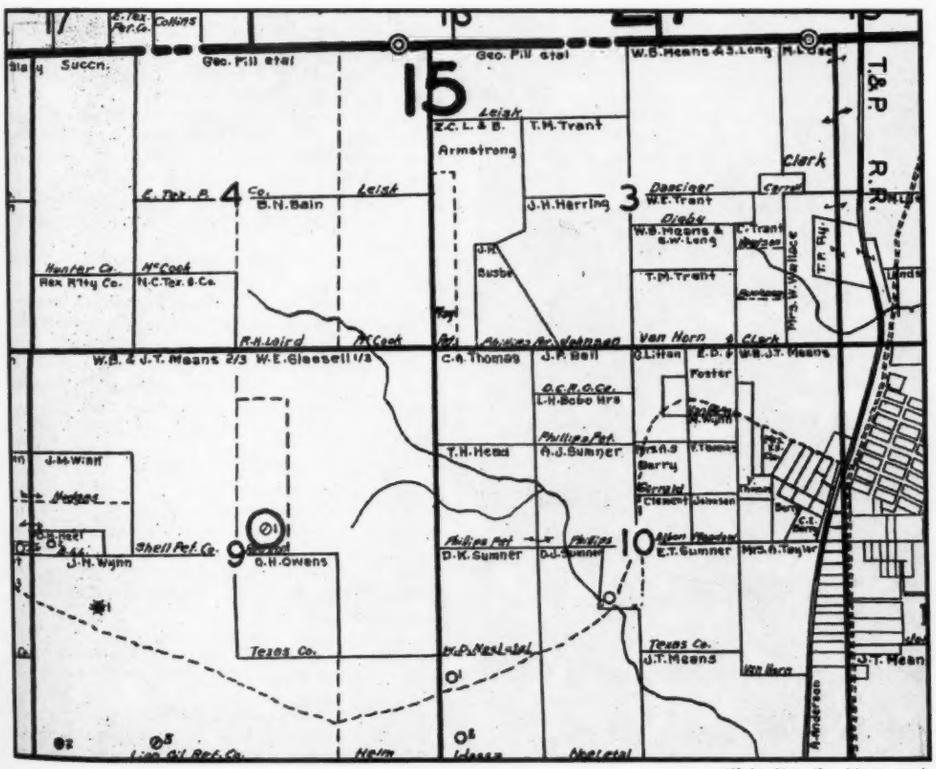
It has been estimated that about 300,000,000 feet of gas is being saved daily through the application of the recent Louisiana gas-oil ratio order. The present order allows a ratio of 25,000 feet of gas to 1 bbl. of distillate for the gas-distillate wells, and 12,500 feet per barrel for the oil wells. Under such a ruling only the wells with the highest ratios have been affected. It is reported that distillate wells, on the average, are losing about half of their production, and some decline has been noted in the daily oil production.

J. Edward Jones No. 1 Rockefellow, townsite completion for the week, flowed 74 bbls. of distillate in 18 hours, with a gas production of 6,000,000 feet during that time. After reaching the maximum gas flow in 18 hours, the well was shut in under the new order.

Positive chokes are now used to insure that wells are cut back sufficiently to come within the ratio specified, but some consideration is being given to installation of meters.

B. F. Snyder and others have erected derrick for a western outpost test of the Rodessa field, to be drilled in the David Lane Survey of Marion County, about 7 miles west of present production, and at a point which some believe to be south of the persistent Rodessa fault.

The eastern extension area's most important outpost showed for a gas-distillate producer this week. Red Iron Drilling Co. No. 1 Means, section 9-23-15, flowed 8 bbls. of distillate per hour through one-eighth inch tubing choke, tubing pressure 1,750 pounds, casing pressure 900 pounds. Production is from the Hill sand (uppermost productive member of the Rodessa series), which was topped at 5,800 feet, where 7-inch was set. The Gloyd was topped at 5,917 feet and no Neugent sand was present, the zone of usual oil saturation in this territory. The thinning out of the lower sands here may indicate a defining limit to the eastward drilling campaign.



—Globe Map Co., Shreveport.

Northeastern Rodessa area where Red Iron Drilling Co. test in section 9-23-15 showed gas with distillate in the Glen Rose section of the Trinity series. A producing well here would start a new drilling campaign near the town of Ida

Rodessa Completions

Rodessa completions for the week were as follows:

J. Edward Jones No. 1 Rockefellow, Lot 3, Block 21, section 23-23-16, townsite, flowed 74 bbls. distillate in 18 hours, with 6,000,000 feet of gas, through one-half inch tubing choke, tubing and casing pressure 1,500 pounds, total depth 6,005 feet.

Phillips Petroleum Co. No. 2 Cora Woods, SW N half NE section 17-23-15, eastern extension area, flowed 22 bbls. per hour through three-eighths inch tubing choke, tubing pressure 575 pounds, casing pressure 150 pounds, saturation topped at 6,051 feet, total depth 6,082 feet.

Phillips Petroleum Co. No. 3 Cora Woods, SW NE NE section 17-23-15, flowed 38 bbls. per hour through three-eighths inch tubing choke, tubing pressure 100 pounds, casing pressure 125 pounds, saturation 6,010 feet, total depth 6,047 feet.

United Gas Public Service Co. No. 2 fee 574, SW SE section 16-23-16, flowed 75 bbls. per hour through one-half inch tubing choke, casing pressure 300 pounds, tubing pressure 575 pounds, saturation topped 5,949 feet, total depth 5,995 feet.

United Gas No. 2 L. Gibson Estate, section 15-23-16, flowed 32 bbls. per hour through one-half inch tubing choke, casing pressure 550 pounds, tubing pressure 200 pounds, saturation topped 5,952 feet, total depth 5,993 feet.

United Gas No. 3 L. Gibson Estate, section 15-23-16, flowed 33 bbls. per hour through one-half inch tubing choke, tubing pressure 250 pounds, casing pressure 800 pounds, acidized with 1,000 gallons, saturation topped 5,962 feet, total depth 5,987 feet.

United Gas No. 2 Gibson Unit, NE SE NW section 15-23-16, flowed 72 bbls. per hour through 37/64-inch tubing choke, tubing pressure 400 pounds, casing pressure 800 pounds, saturation topped at 5,970 feet, total depth 5,980 feet.

United Gas No. 10 M. L. Pitts, SE SW SW section 13-23-16, flowed 3 bbls. of distillate per hour through one-half inch tubing choke, tubing pressure 1,450 pounds, casing pressure 1,550 pounds, saturation topped 6,060 feet, total depth 6,097 feet.

United Gas No. 3 W. B. Spearman, SW cor. section 15-23-16, flowed 16 bbls. per hour through 26/64-inch tubing choke, tubing pressure 300 pounds, casing pressure 605 pounds, saturation topped at 5,973 feet, total depth 5,988 feet.

United Gas No. 4 J. L. Young, NE cor. section 28-23-16, flowed 26 bbls. per hour through three-eighths inch tubing choke, tubing pressure 350 pounds, casing pressure 825 pounds, saturation topped 5,927 feet, total depth 5,954 feet.

R. J. Wolfe No. 1 R. G. Fitts, SW SE NE section 8-23-18, flowed 24 bbls. per hour through three-sixteenths inch tubing choke, tubing pressure 575 pounds, casing pressure 1,250 pounds, saturation 5,959 to 5,973 feet, total depth 5,973 feet.

Ohio Oil Co. No. 2 R. P. Willis, Robert Trammel Survey, Cass County, Texas, flowed 20 bbls. per hour through one-quarter inch tubing choke, saturation topped 5,963 feet, total depth 5,984 feet.

Superior Oil Company No. 3-A Chew, Robert Trammel Survey, flowed 519 bbls. in 24 hours through one-quarter inch tubing choke, tubing pressure 790 pounds, casing pressure 850 pounds, saturation 5,930 feet, total depth 5,987 feet.

Texas Co. No. 2 E. E. Hall, James Young Sur-

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vey, flowed 40 bbls. per hour through one-half inch tubing choke, tubing pressure 500 pounds, casing pressure 625 pounds, saturation topped 6,018 feet, total depth 6,087 feet.

Bienville Parish

J. W. Leonard No. 1 Courtney heirs, SE cor. section 5-17-7w, about 4 miles southwest of Gibsland, shared in the wildcat interest this week when it recovered oil saturated cores from the Travis Peak. After coring continuously since 5,360 feet, operators were planning to abandon the hole when a 10-foot core was recovered at a depth of 7,177 feet in the Travis Peak, the lower 18 inches carrying what was reported to be heavy oil saturation. Plans are to continue coring and prepare for drill stem testing.

Estimated Daily Production

Estimated daily gross production in the week ending October 3, 1936:

NORTH LOUISIANA

Bellevue	865
Caddo light	4,000
Caddo heavy	2,595
Converse	810
Cotton Valley heavy	290
Cotton Valley light	575
De Soto and Red River	1,455
Elm Grove	385
Haynesville	3,390
Holly	145
Homer	2,585
Pleasant Hill	150
Rodessa	56,385
Sarepta-Carterville	425
Urania	2,985
Zwolle	950
Total	77,990

SOUTH ARKANSAS

Champagnolle	2,130
El Dorado	2,100
Lisbon	290
Miller County	650
Nevada	865
Smackover light	2,180
Smackover heavy	17,730
Stephens	590
Urbana	1,690
Total	28,225

Texas side of Rodessa field—15,415 bbls. daily.

Bossier Parish

Premier Investment Co. completed another Nacatoch sand producer in the Bellevue field, No. 30 Wyche, NE cor. section 14-19-11, pumping 12 bbls. daily, total depth 432 feet.

Caddo Parish

Bayou State Oil Co. No. 2 Jolly, NW NE SW section 22-22-15, pumped 15 bbls. daily on completion test, total depth 1,001 feet. This well is located in the old Hosston field, the first well completed for a long while in this area.

W. D. Chew No. 1 Spell, SW cor. SE SW section 29-21-15, pumped 25 bbls. daily on initial test, total depth 2,122 feet.

Gulf Refining Co.'s highly regarded Cross Lake test, No. 1 E. P. Hatcher, SW cor. section 11-17-15, is drilling at 5,850 feet in lime, without important showings.

Prairie River Syndicate No. 1 Hutchinson, SW NW section 15-15-12, near Caspiana, encountered an entirely new formation for this territory. From a depth of 6,645 to 6,750 feet, a pink anhydrite was encountered, showing no evidence of fossil life. This occurred about 2,000 feet below the Middle Glen Rose (basal anhydrite). Geologists have been unable to correlate this formation as yet. The well is now coring below 6,875 feet.

Red River Parish

The old Bull Bayou field is to receive a Travis Peak test on the extreme northeast flank, as W. J. Hunter and others have begun drilling on the No. 1 Long Bell Lumber Co., NE NE section 19-23-9w. This will be the first deep test for this area, and will be in the center of a 4,000-acre block assembled by Hunter and associates. The Bull Bayou field has been producing since 1912 from the Nacatoch at about 800 feet, and the Bull [illegible] sand at about 2,750 feet.

Richland Parish

[illegible]roductive sands have not been encountered in the Travis Peak formation in the Richland gas field flank test being drilled by the Gulf Refining Co. Topping the Travis Peak at 4,662 feet, the No. 15 R. R. Rhymes well, section 32-17-6e, is now

(Continued on Page 74)

A Tubing Wrench
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The Universal handle of the Ratigan No. 92, Tubing Wrench (shown above right), embodies a new principle in tubing wrenches. By means of a snap action, the wrench handle can be tilted 4" when the jaws are clamped around the pipe and the wrench can swing 8" from extreme up and down positions. This permits more positive tightening and eliminates the necessity of hammering the collar to loosen the joint, with the costly damages resulting from this practice. Use of the snap feature of this wrench, or regular "set" handle action, is optional. These handles will accommodate 2", 2½" and 3" jaws and can be changed in a few seconds. Prices on Universal handle and solid handle (above left) are the same. Write for descriptive folder on full line of Ratigan "Sure-Grip" Appliances.

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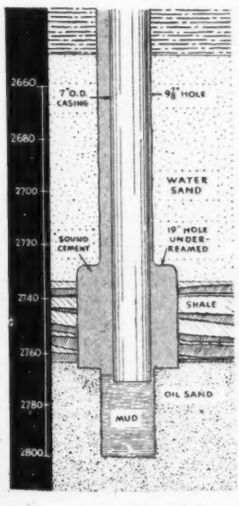

Look on Pages 187-191 of your 1936 COMPOSITE CATALOG

Among Gulf Coast Drilling Contractors

Al Buchanan of San Antonio has moved two rigs into the newly opened Flour Bluff field of Nueces County. They will drill the first two of four tests now starting for the Humble Oil & Refining Co. in the field. Another rig is drilling for Humble in the Kohler field of Duval County. In addition, Buchanan crews are active in the Plymouth field of San Patricio County drilling for the Plymouth Oil Co., and a wildcat is being drilled for Benedum & Trees Oil Co. in Calhoun County.

Rowan Drilling Co. abandoned No. 1 Manhattan Fruit Co. in Plaquemines Parish for the Tide Water Oil Co. and is rigging up for a second test which will be located a short distance from the abandoned hole. Two rigs are active at the Monument area in Lea County, New Mexico, for the Amerada Petroleum Corp. One rotary is on location near Tivoli in Refugio County for the Tide Water Oil Co., while two are standing after completions had been made at the Sinton and Cayuga fields.

Nicklos Drilling Co. is drilling below 6,720 feet on No. 7-A Homeseekers Development Co. and below 7,728 feet on No. 2 P. W. Miller, both of which are located in the Tepetate field and are being drilled for the Continental Oil Co. at the Port Barre field, several production tests made on the Pan American Production Co., No. 1 Garland proved dry, and it is drilling ahead below 3,552 feet.

Glenn H. McCarthy was making a production test on his No. 2-A Longe at Amelia in Jefferson County, bottomed in sand at 6,105 feet and a drill stem test was to be made on his No. 3 Kilgore in the Cotton Lake field in Chambers County. In addition two wells are being drilled at Anahuac for Humble Oil & Refining Co.

Edwards Drilling Co. received contract for the Humble Oil & Refining Co. for No. 1 Howard at Cotton Lake, and a rig is being moved to the location. At Sour Lake, for the Kirby Petroleum Co. and Woodley Petroleum Co., No. 1 Minerva Merchant Subdivision is drilling below 2,000 feet, while No. 1 Harding in Hidalgo County is drilling below 7,700 feet.

C & C Drilling Co. has moved its rig from the Ace field in Polk County to the South Houston field, where it will drill No. 1 Bennett for itself and Dick Schwab.

Cron & Gracey have spudded No. 1 Pansy Yount, located in the north extension area of the Amelia field, for Texas Co. and are moving in a rig to the Manvel field for the same company. In the meantime, progress is being made on five other holes located as follows: One at St. Martinsville for Continental Oil Co.; one at Iowa for Shell Petroleum Corp.; one at Hitchcock in Galveston County for the Shell Petroleum Corp.; one at the Flour Bluff field for Barnsdall Oil Co. and one at West Columbia for the Texas Co.

Rutherford Drilling Co. is preparing to complete No. 10-B Cobb in the Van Vleck field for Skelly Oil Co. and received contract for No. 11-B Cobb and a rig is being moved to location.

Smith & McDannald have completed Pan American Production Co. No. 1 Louis Craig in the south extension area of the Dickinson field in Galveston County and have spudded No. 1 Shelor in the north part of the field for Pure Oil Co. In addition their crews are active in the South Houston field for Stanolind Oil & Gas Co., at Louise for Pure Oil Co., at Sorrento for the Pan American Production Co. and at Liberty and Cayuga for themselves and Tide Water Oil Co.

OIL DISCOVERY TRANSFORMS TOWN

Gulf Coast oil men will be interested in this recent scene in Talco, in Titus County. It was a nearly forgotten town before the oil men revived it

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Oklahoma Operations

By
DAL DALRYMPLE

LATIMER COUNTY GETS DEEP TEST; OTHER NEW WILDCATS

After a summer in the doldrums, wildcat activity in Oklahoma shows definite signs of reviving with interesting tests in farflung sections of the state being announced the past week. Otherwise field news was little more than routine, although the Crescent area of Logan County continued to feature the oil news with gusher production.

Latimer County gets one of the new wildcat tests, the Cheyenne Oil Co. having started work at No. 1 Irvin L. Wilson, C SE SE section 15-5-18, southwest of Wilburton. Location is on a block of about 11,000 acres, at the east end of the McAlester basin, between the Carbon and Choctaw faults. It will be a Wilcox sand test, that formation being expected at around 5,500 to 6,000 feet. Three shallow gas wells previously have been drilled in the block.

New wildcats also are scheduled for Love and Tillman Counties. Magnolia Petroleum Co. was reported preparing to start a test north of Marietta, in Love County, at No. 1 R. A. Gardner, NE NE NW section 34-6s-2e. Location is south of the Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Westheimer & Daube, in section 27-6s-2e, which showed for production in Viola lime at 2,430-2,970 feet and then went dead, after originally drilling to 7,363 feet and plugging back. Work on the new wildcat, to be drilled with cable tools, is due to start this month. Over in Tillman County, Indian Territory Illuminating Oil Co. was reported examining titles, preparatory to staking location for a wildcat test in section 30-2s-17w or section 31-2s-17w, south of Frederick. The company has several thousands of acres under lease in this area.

A new search for prolific pay in the Billings area of Noble County has been started by Tide Water Oil Co. with the staking of location for No. 1 Hackett, NE NW SE section 21-23-2w. Location is southeast of the newest well completed at Billings, the Phillips Petroleum Co. and Shell Petroleum Corp. No. 3 McCaughtry, NE SE NE section 21-23-2w, which produced 109 bbls. of oil in 1 hour and 45 minutes, with 100,000,000 feet of gas.

In the Garber area of Garfield County, Ohio Oil Co. No. 1 Smythe, NE NE NW section 23-22-4w, a Wilcox sand test, was drilling below 4,020 feet, still in the Pennsylvanian formation.

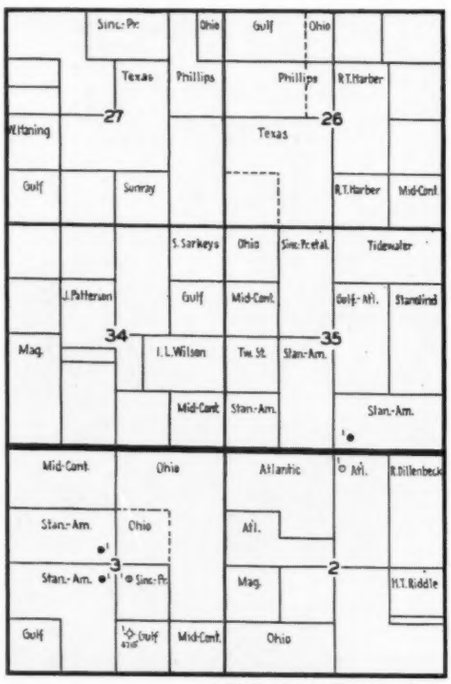
In the Stout area of northwestern Seminole County, Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Parks, SE SE SW section 35-11-5, had Wilcox sand at 4,627-34 feet, total depth, swabbed 750 bbls. of oil in 14 hours and was shut in for tankage. Gulf Oil Corp. has staked location for No. 1 Community, NW NW SE section 35-11-5, in the northern sector of the Stout area.

Two wells in the Crescent field held attention during the week. Mid-Continent Petroleum Corp. No. 4 Campbell, SW SE NE section 33-17-4w, had Wilcox sand at 6,160-6,275 feet and flowed 4,644 bbls. in four hours, giving it a potential rating of 25,772 bbls. Gas averaged 48,000,000 feet. Texas Co. No. 4 Denny, SW SE SE section 33-17-4w, at the south end of the deep pay area, flowed 1,085 bbls. of oil in one hour, but potential test had not been taken. It is bottomed at 6,274 feet in Wilcox sand.

Pontotoc County

All five Pontotoc County completions were in the Fitts field. The largest was the E. H. Moore and others No. 1-A Benton, NW NE NW section 32-2-7. It topped Bromide at 3,795 feet; McLish, 4,020 feet; Dense, 4,265 feet, and was completed in Wilcox sand at 4,350-4,405 feet, total depth. It flowed 758 bbls. of oil in one hour through Hydril, and made potential of 4,482 bbls. Same operators' No. 3-A Moody, NE SE SE section 22-2-7, topped Hunton lime at 3,510 feet; Sylvan shale, 3,896 feet; total depth, 3,898 feet. It flowed 346 bbls. naturally in two hours through casing, and after acidizing flowed 780 bbls. in six hours through tubing.

J. E. Crosbie, Inc. No. 3-B Dawes Harden, NE SW NE section 30-2-7, topped Hunton at 3,420 feet; Sylvan, 3,627 feet; total depth, 3,628 feet. After acidizing with 10,000 gallons, it flowed 395 bbls. through casing in one hour. Skelly Oil Co. No. 15 Park College, SE NW NE section 28-2-7, flowed 406 bbls. of oil through tubing in two hours after acidizing with 10,000 gallons. Top of Hunton was 3,332 feet; Sylvan, 3,633 feet; total depth, 3,635 feet. Fleetborn Oil Corp. No. 4-A Morin, SW SW SE section 20-2-7, topped Hunton at 3,485 feet; Sylvan, 3,770 feet; total depth, 3,773 feet. After acidizing with 4,000 gallons, it flowed 291 bbls. through tubing in three hours, and later flowed 99 bbls. in one hour.



—Mid-Continent Map Co., Tulsa.

Map showing recent developments in the Stout pool, northeastern Seminole County. Stanolind Oil & Gas Co. and others No. 1 Parks, SE SE SW section 35-11-5e, newest producer in the area, flowed and swabbed 750 bbls. in 14 hours and was shut in

New work in Pontotoc County follows: E. H. Moore and others No. 2 Burris, N half SW NW SE section 22-2-7, location; Simpson-Fell Oil Co. No. 3 Westheimer, SE NW NW section 26-2-7, cellar; Magnolia Petroleum Co. No. 12 Burris "A," SW SW NW section 27-2-7, location; same operator's No. 25 Metropolitan Life, NE NW SW section 27-2-7, location; Fleetborn & Simpson No. 5-A Woolley, NE NE SE section 28-2-7, total depth 535 feet, reaming; Magnolia Petroleum Co. No. 13 Simpson, SW NE NE section 29-2-7, location; same operator's No. 7 D. Harden, SW NW NE section 30-2-7, location; same operator's No. 8 D. Harden, NE NW NE section 30-2-7, location; E. H. Moore and others No. 1 Benton, NW NE NW section 32-2-7, old well being deepened, pulling tubing.

The Caloma Oil Co. of California has spudded at No. 1 W. H. Brents, SE SE NE section 4-1-6, on their block of acreage recently assembled 2½ miles southwest of the Fitts field. The Caloma company has a block of about 2,500 acres, with favorable geology around location of the new test. This test will be watched with considerable interest, because most recent drilling in that part of Pontotoc County has been on the east side of Fitts. Nels Burton Drilling Co., Oklahoma City, has the contract for the test, which will be carried to 4,800 feet if necessary.

Estimated Daily Production

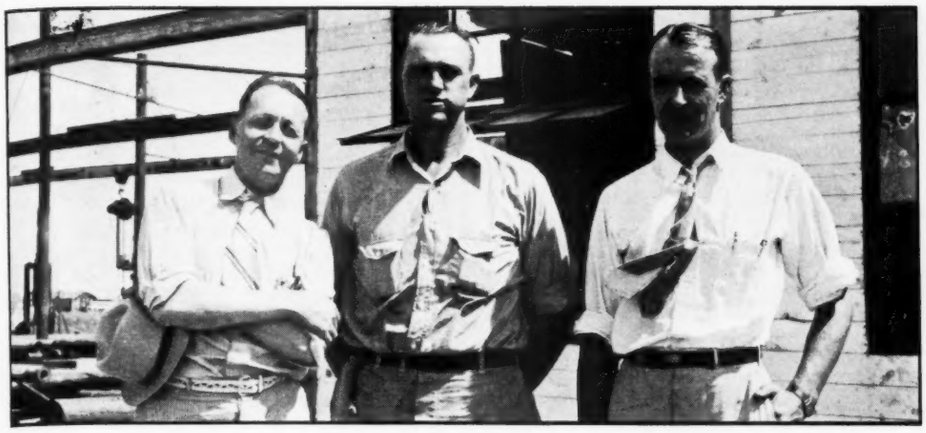
Estimated daily average production of Oklahoma for the week ending October 3 and for the preceding week is as follows:

	Barrels	
	Oct. 3	Sept. 26
Allen	8,250	8,950
Burbank	7,700	7,800
South Burbank	14,500	14,600
Balance Osage	22,000	22,600
Blackwell district	5,375	5,325
Bristow-Slick	8,450	8,425
Chandler	3,875	4,025
Crescent	7,200	9,100
Cromwell	3,550	3,675
Cushing-Shamrock	11,350	11,375
Duncan district	4,050	4,025
Edmond	11,825	17,325
Fish	7,175	7,325
Fitts	58,500	65,150
Gray	1,500	1,525
Graham	4,725	4,750
Healdton	9,475	9,450
Hewitt	4,475	4,500
Holdenville	1,025	1,000
Keokuk	6,600	6,650
Konawa	1,700	1,925
Lucien	12,250	12,825
Marshall-Lovell	650	750
Oklahoma City	131,950	143,500
Olympic	7,450	8,775
Papoose	975	950
Polo	2,625	2,725
Sasawka and townsite	2,850	2,825
Sholem-Alechem	3,425	3,400
Seminole field:		
Bowlegs	11,275	11,575
Carr City	5,850	5,900
Earlsboro	6,275	6,400
South Earlsboro	875	925
East Earlsboro	9,575	9,825
Little River	12,150	12,525
East Little River	1,075	1,275
Maud	875	950
Mission	2,100	2,425
Seminole	9,975	10,000
East Seminole	4,850	4,125
Searight	4,900	5,525
Total Seminole	69,775	71,450
St. Louis-Pearson	23,375	24,350
Tatums	3,175	3,150
Tonkawa-Garber-Thomas	5,550	5,550
Wewoka	3,900	3,975
Yale-Jennings	4,100	4,100
Other pools	72,275	72,750
Total Oklahoma	547,525	580,575

Oklahoma County

Two new wells were completed and two old wells were deepened and recompleted. British American Producing Co. No. 1 Culbertson, NE cor. section 27-12-3w, topped second Wilcox sand at 6,328 feet and was bottomed at 6,449 feet, in green shale topped at 6,445 feet. It made 24-hour potential of 11,791 bbls. Knox Garvin and others No. 1 Woodbridge, NW SE SE section 27-12-3w, flowed 760 bbls. in three hours and made potential of 6,016 bbls. Top of second Wilcox sand was 6,344 feet; total depth, 6,495 feet in green shale.

British American Oil Producing Co. No. 1 Russell, SE NE SE section 22-12-3w, an old well, was deepened from 6,472 feet to 6,513 feet, total depth, and flowed 3,542 bbls. in 16 hours and 15 minutes on gas lift. W. S. Key, Inc. No. 1 Pryor, NE NE



W. H. Eason, W-K-M Co., Inc., Tonkawa, Okla.; B. C. Acuff, superintendent, Olson Drilling Co., Fittstown, Okla., and G. E. Mason, W-K-M Co., Inc., Houston, Tex.

SE SW section 15-12-3w, was deepened from 6,480 feet to 6,501 feet, total depth, without increasing production and was recompleted.

Three new Oklahoma County operations were reported as follows: Sunray Oil Co. and Phillips Petroleum Co. No. 3 Harn, NE NE SE NW section 27-12-3w, digging cellar; British American Oil Producing Co. No. 1-A Warr, SE NW SE section 22-12-3w, old well, deepened to 6,511 feet; Ohio Oil Co. No. 1 Johnson, SE cor. section 25-14-4w, digging cellar.

Knox Garvin No. 1 Mason, SE cor. section 27-12-3w, had best pay and second Wilcox sand at 6,306 feet; total depth, 6,433 feet, in light green shale topped at 6,425 feet. It was flowing at the rate of 35 bbls. of oil an hour, with 14,000,000 feet of gas.

Seminole County

Only one new producer was completed in Seminole County. Ross Oil Co. No. 1 Hollis, NE SE NE section 17-9-7, flowed 1,750 bbls. of oil in 48 hours and was completed at 3,452 feet, total depth. Top of Cromwell sand, the producing horizon, was 3,447 feet. Big Lime was topped at 3,280 feet; Booch, 3,330 feet; Gilcrease, 3,385 feet.

Pure Oil Co. No. 2 Harjo, NW SW NE section 11-7-6, an old well, was deepened from 4,217 feet to 4,292 feet, pumped 150 bbls. in 24 hours, recompleted. Magnolia Petroleum Co. No. 1 Harjo "B," SE NE NE section 14-7-6, an old well, was deepened from 4,353 feet to 4,408 feet, had a hole full of water, and was abandoned. Sinclair Prairie Oil Co. abandoned No. 4 House, NE NW SE section 2-7-6, an old well, after it was deepened from 4,290 feet to 4,384 feet, plugged back to 3,300 feet, ripped casing and water intruded. It topped second Wilcox sand at 4,378 feet.

Four new operations in Seminole were reported: Vierson No. 6 Jones, NW SW NW section 11-6-6, set 12-inch casing at 47 feet and was waiting; Fleetborn Oil Corp. No. 2 Patton, SW NW SW section 18-6-8, was a rig; Champlin Oil & Refining Co. No. 2 Tewee, NE SE NE section 14-7-6, an old well being deepened, drilling at 4,700 feet; Rogers Oil & Gas Co. No. 1 Hall, SE SE NE section 17-9-7, location.

A. A. and R. W. Vierson No. 3-A Jones, NE SW NW section 11-6-6, was shot with 90 quarts at 2,390-2,410 feet, swabbed 50 bbls. of oil in 24 hours and was cleaning out. Total depth is 2,474 feet. Sinclair Prairie Oil Co. No. 4 Warrior, NW SW SW section 17-9-7, swabbed and flowed 150 bbls. in 24 hours at 3,493 feet, total depth. Tom Phillips and Kimrow Drilling Co. No. 1 Thompson, SW NE NW section 19-9-7, flowed 152 bbls. of oil in 12 hours at 4,054 feet, total depth.

Osage County

Completions in Osage County included two wells in the South Burbank area and one in the Naval Reserve pool. Carter Oil Co. and others No. 5 McKinley, SW NE SW section 35-26-6, had Bartlesville sand at 2,810-76 feet; total depth, 2,878 feet. It flowed 254 bbls. of oil in 24 hours, with 2,310,000 feet of gas. Kewanee Oil & Gas Co. No. 1 Alfred, NW SW NE section 26-26-6, flowed 300 bbls. in five hours after a shot and made potential of 933 bbls. It topped Bartlesville sand at 2,844 feet; total depth, 2,899 feet; plugged back to 2,896 feet and shot at 2,851-96 feet.

Lewis Production Co. No. 9 Osage, NE SW NE section 28-24-7, Naval Reserve area, swabbed and flowed 149 bbls. of oil in 24 hours after an 80-quart shot at 2,683-2,723 feet. Top of Bartlesville sand was 2,641 feet; total depth, 2,723 feet.

McMahon & Price No. 1-A Osage, NE cor. section 31-24-11, pumped 12 bbls. of oil and 12 bbls. of water in 24 hours and was completed at 1,726 feet, total depth. Burgess sand was topped at 1,685 feet; Bartlesville sand, 1,552 feet. Production was from both horizons. Ohio Osage Oil Co. and others No. 27 Osage, NW SW SW section 9-21-9, had sand at 282-317 feet and was completed as a repressure well. The same fate befell same operators' No. 28 Osage, NE NW SW SW section 9-21-9, which had sand at 272-317 feet, total depth.

The following new work was reported in Osage County: F. A. Gillespie & Sons Co. No. 5 Osage, SE NW SE NE section 5-20-12, old well to be deepened; Ohio Osage Oil Co. No. 29 Osage, SE NW SW SW section 9-21-9, location; E. O. Platter No. 14 Osage, NW NW SW NE section 30-22-9, loca-

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tion; Carter Oil Co. and others No. 7 Betty Higdon, SE SW NE section 3-25-6, location; same operators' No. 8 Kennedy, NW NW SE section 34-26-6, location; same operators' No. 4 Walter Mosier, SE NE SW section 34-26-6, location.

Okfuskee County

Senora sand yielded production for three new wells in southwestern Okfuskee County, two in the Olympic sector and one in the Bearden area. J. A. Chapman No. 1 Cudjo, SE cor. section 25-10-8, topped the sand at 1,698 feet; total depth, 1,756 feet. It was shot and flowed 50 bbls. in one hour through casing and 127 bbls. in 24 hours through tubing. Earl Evans and Morris No. 1 Lively, SE SE NW section 36-10-8, pumped 35 bbls. of oil and 80 bbls. of water in 24 hours after a shot. Top of Senora sand was 1,741 feet; total depth, 1,772 feet. J. J. Deaner No. 2 Hollis, SW SW NE section 19-10-9, topped Senora sand at 1,767 feet; total depth, 1,820 feet. It was shot and swabbed 100 bbls. of oil in 24 hours.

First reports were received on the following new Okfuskee County work: J. A. Chapman No. 2 Cudjo, SW SE SE section 25-10-8, drilling at 620 feet; Blackwell Oil & Gas Co. No. 6 Dalton, NW NE NE section 26-10-8, building rig; Gulf Oil Corp. No. 7 Cohee, SE NW NW section 31-10-9, drilling at 300 feet; Manahan Oil Co. No. 4 Schlatz, SW NE NW section 31-10-9, cellar; Deep Rock Oil Corp. No. 1-A Palmer, SE SW SE section 23-12-11, machine.

Hughes County

Rogers Oil & Gas Co. No. 1 Barnhart, SE SW SW section 5-6-8, was the only Hughes County completion. It topped lime at 2,518 feet and had Booch sand at 2,744-56 feet; total depth, 2,757 feet. On completion test it pumped 52 bbls. of oil in 24 hours.

New operations in Hughes County included a wildcat test between the Papoose and South Wetumka areas. It was Mid-West Oil Co. No. 1 Turner-Lucas, C SE NW section 13-9-9, a rig.

Davon Oil Co. No. 1 Browning, CWL NE SE NW section 5-8-10, set 12-inch casing at 52 feet and was waiting. Rogers Oil & Gas Co. No. 1 Rogers, SE SW SW section 5-6-8, was a location.

Stanolind Oil & Gas Co. No. 3 Roger "D," NE SE NW section 8-6-8, flowed 306 bbls. of oil in two hours at 4,215 feet, total depth. Dolomite was topped at 4,156 feet; Wilcox sand, 4,205 feet.

Carter County

Two new, small pumpers were completed and two old wells were deepened and recompleted in Carter County. Karchmer and others No. 5 Lynn, NW SE NE section 31-1s-2w, had sand at 1,541-51 feet; total depth, 1,700 feet. Casing was perforated at 1,538 to 1,571 feet, and it pumped 30 bbls. of oil in 24 hours. Shell Petroleum Corp. No. 46 McClure, SW NW SE section 5-4s-3w, had sand at 1,010-30 feet and 1,050-80 feet; total depth, 1,125 feet. It was shot and completed as a 3-bbl. pumper.

Jones Brothers and others No. 7 Humble-Dillard, SW SE NE section 22-4s-2w, was deepened from 2,393 feet to 2,805 feet; plugged back to 2,430 feet; pumped 2 bbls. of oil and 20 bbls. of water and was recompleted. Carter Oil Co. No. 10 Strowman, C W half NW SW section 23-4s-2w, an old well, had sand at 2,013-38 feet, total depth; perforated casing and pumped 8 bbls., recompleted. Old total depth was 1,850 feet.

Carter Oil Co. No. 1 Perkins, NW NW SE section 4-1s-3w, was location for the only new Carter County test.

Stephens County

Hartman & Hamilton No. 1-A Robberson, NW cor. section 15-3s-5w, Stephens County, had sand at 1,464-92 feet, total depth, pumped 48 bbls. of oil in 24 hours and was completed. Texas Co. No. 3 Bohanan, NE NW NW section 15-3s-5w, pumped 35 bbls. of oil in 24 hours from sand at 1,452-53 feet, total depth, and was completed. Bridwell Oil & Gas Co. No. 3 Nigh, NW SE SW section 11-2s-8w, was dry and abandoned at 2,112 feet, total depth, in shale. C. F. Dillingham and others No. 1-A Hollum, NE cor. section 36-2n-5w, was dry and abandoned at 1,009 feet, total depth.

T. H. McCasland and others No. 1 Hilderbrand, SW SE NE section 1-3s-7w, an old wildcat, was deepened from 3,003 feet to 4,601 feet in lime and was dry and abandoned. Golden & Cochrane No. 3 Gann, NW SE NW section 31-2-4w, an old well, was abandoned after deepening from 973 feet to 1,506 feet and plugging back to 973 feet.

Jackson County

Gulf Oil Corp. No. 1 O'Neil, NW NW SW section 5-1s-19w, in the Tipton area, Jackson County, had best pay at 2,633-35 feet, total depth, and flowed 289 bbls. of oil through 2-inch tubing in 24 hours, completed. Same operator's No. 4 S. J. Ellis, SW SE NE section 6-1s-19w, flowed 225 bbls. through tubing in 24 hours and was completed at 2,606 feet, total depth. It had Arbuckle lime at 2,593-2,601 feet.

Beckham County

Carter Oil Co. completed No. 1 Davidson, C NW SW section 2-9-25w, Beckham County, as a gas well. It was bottomed at 6,598 feet in shale. The casing was perforated at 3,660-67½ feet and when it tested oil and water it was plugged back to 3,571 feet, was shot several times and produced 12,000,000 feet of gas, with 1,120 pounds pressure. At one time it looked as though this test might be an oil well, as it swabbed 120 bbls. of oil with 400 bbls. of water at 3,701 feet.

Grady County

John Graham and others No. 1 T. H. Castleberry, SW SE NW section 8-5-7w, Grady County, had sand showing some oil at 1,900-08 feet, but the hole filled with water at 1,909 feet, total depth, and it was abandoned. This wildcat was southwest of Ninnekah.

Murray County

Hornsby & Jones No. 1 Sadler, NE NE NW section 20-1-2, wildcat northeast of Davis in Murray County, recovered asphaltic sand in cores at 2,664-74 feet, total depth, and was dry and abandoned. This test was started in May, 1935, and was shut down at 1,680 feet early in January, this year. The Arrow Drilling Co. resumed work in

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September. Bromide was topped at 2,260 feet; sand, showing heavy asphaltic oil, at 2,624-52 feet.

Creek County

Sinclair Prairie Oil Co. No. 12 Gilcrease, SE SW SE section 33-17-12, Creek County, had Wilcox sand at 2,235-55 feet, total depth; pumped 20 bbls. of oil an hour and was completed. Klingensmith & Anthony No. 1-A Gilcrease, SW SE SE section 33-17-12, had Wilcox sand at 2,245-82 feet, total depth, produced 11 bbls. an hour and was completed. Roos and others No. 1 Gates C E half SE section 21-16-9, was plugged and abandoned in Dutcher sand at 2,902-12 feet, total depth.

Leif Olson, district superintendent, Olson Drilling Co., and J. B. Thompson, chief clerk, Olson Drilling Co., Seminole, Okla.

One new Creek County test was reported, the Sinclair Prairie Oil Co. No. 13 Upton, C E half NE NE section 4-16-12, which was rigging up machine.

Okmulgee County

One well in Okmulgee County was completed, the Dodge No. 10 Payne, SE NE SE section 17-15-14. It had pay at 833-69 feet and pumped 10 bbls. of oil in 24 hours.

Two new Okmulgee tests were reported. Reliance Oil Co. No. 8 Cowan, CNL SE SW section 26-16-11, was drilling at 150 feet. Dodge No. 11 Herrod, NE NE SE section 17-15-14, was a location.

Various New Tests

Bridwell Oil Co. No. 3 Barnett, SW NW SW NE section 30-6s-5w, Jefferson County, was a derrick.

J. M. Young No. 1 Cooke, NE NE NW section 33-2-16w, Kiowa County, was a machine for a wildcat test.

Indian Territory Illuminating Oil Co. No. 1 W. S. Drumm, C SW NW section 32-2s-17w, was location for a wildcat in Tillman County.

Magnolia Petroleum Co. No. 7 Ross Wagner, NW SE SE section 2-14-3, was location for a test in Lincoln County; Hilton Phillips No. 1 Graham, NW SW NW section 2-14-3, Lincoln County test reported for the first time, was drilling at 2,900 feet.

Sinclair Prairie Oil Co. No. 5 Gammon, SW SW NW section 30-7-5, Pottawatomie County an old well, was rigging up to deepen.

Phillips Petroleum Co. No. 3 O'Neil, SE SW SE section 16-23-2w, was a location for a test in Noble County.

Peter Adamson, Jr. No. 8 Thomas, SW SW NE section 25-21-8, was a location for a well in the Cleveland area, Pawnee County.

Metal Statistics—1936

The annual edition of Metal Statistics for 1936, published by American Metal Market, 111 John Street, New York City, is off the press. This is the twenty-ninth edition of this valuable little book and as usual contains statistical information on ferrous metals and nonferrous metals and miscellaneous economic subjects. It is edited by B. E. V. Luty and N. J. Langer and is priced at $2 per copy.

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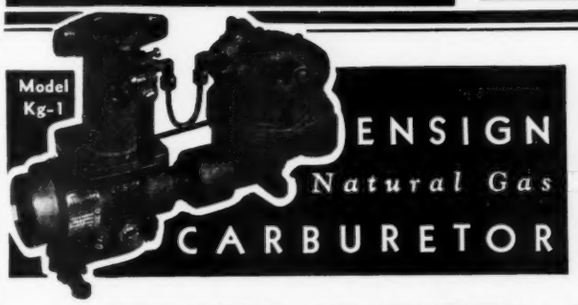

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Kansas Developments

By DAL DALRYMPLE

WILDCAT OPENS POOL NORTH OF HAUSCHILD GUSHER AREA

The Rice County wildcat strike of L. E. Douglass of Hutchinson and Dick Sage of Wichita was the highlight of an unusually quiet week in the Kansas oil fields. Their well, the No. 1 Patton, SW cor. section 5-21-7w, south of the town of Saxman, has opened a new productive area about 2½ miles northwest of the Hauschild pool, where some of Kansas' biggest gushers have been completed in recent months.

Estimates of production ranged from 2,500 to 5,000 bbls. daily, but potential test had not been taken. The pay was found in Conglomerate at 3,329-37 feet, total depth, a formation similar to that yielding gusher production in the Hauschild wells. Observers believe the new well has opened a pool that will be as productive as the rich Hauschild district. Douglass and Sage own practically all the close-in acreage.

Bradley Oil Co. and John R. LeBosquet No. 1 Penney-Wann, SE cor. section 13-15-20w, wildcat which opened the twelfth pool in Ellis County, pumped 420 bbls. of oil in 22½ hours on potential test. Production is from basal sand at 3,653-58 feet, total depth. It was shut in for connections.

The Schartz sector of the Silica field was extended one-fourth mile south at Mid-Continent Petroleum Corp. No. 1 Wood, NE cor. section 4-20-10w, which swabbed as high as 90 bbls. an hour from Siliceous lime at 3,307-16 feet, total depth. It swabbed 525 bbls. in eight hours, with the peak production in the seventh hour. Estimates of 24-hour production range upward to 2,000 bbls. The swab was not run to bottom because of difficulty in reducing the fluid column below 1,800 feet. The Schartz area is east of the Silica pool.

Estimated Daily Production

Estimated daily average production in Kansas for the week ending October 3 and for the preceding week is as follows:

	Barrels	
	Oct. 3	Sept. 26
Oxford City	3,800	3,875
Burrton	13,975	14,250
Ritz-Canton	5,850	5,875
Hollow-Nikkel	3,800	3,800
Voshell	2,975	2,975
Ellsworth County:		
Lorraine-South Lorraine	6,070	6,855
Other pools	1,135	1,524
Rice-Barton Counties:		
Chase	8,435	9,350
Raymond	2,745	3,485
Silica	13,460	16,045
Keesling	2,705	3,295
Hauschild	2,130	1,685
Miscellaneous Rice	6,142	5,525
Miscellaneous Barton	4,263	4,520
Russell County:		
Fairport	2,380	2,460
Gorham-East Gorham	4,775	5,695
Russell	1,815	4,100
Sullivan	1,550	2,790
Other pools	7,519	7,361
Sedgwick County:		
Valley Center	1,260	1,290
Greenwich	1,350	1,365
Robbins	1,145	1,140
Eastborough	830	960
Other pools	393	477
Ellis County	2,886	3,079
Kingman County	472	483
Stafford County	1,383	2,074
Greenwood County	10,000	10,400
Butler County	17,850	17,900
Other fields	24,707	26,042
Total Kansas	157,800	170,875

Rice County

Five new producers were completed and one old well was deepened and recompleted in Rice County. In the Geneseo district, Empire Oil & Refining Co. No. 1 Janssen "C," NE SW NW section 3-18-8w, made potential of 986 bbls. of water after acid treatment. It topped Siliceous lime at 3,238 feet and was bottomed at 3,272 feet. Continental Oil Co. and others No. 2 G. F. Gibson, NE SE SW section 24-18-8w, topped Siliceous lime at 3,156 feet; total depth, 3,220 feet. After acidizing with 2,000 gallons it made potential of 1,918 bbls. of oil.

Shell Petroleum Corp. and others No. 2 Hafermann, C SE section 6-19-9w, topped Kansas City lime at 2,875 feet; Siliceous, 3,219 feet; total depth, 3,270 feet. It was plugged back to 3,263½ feet, pumped 150 bbls. of oil and 5 bbls. of water in five and one-half hours and pumped off. On potential test it made 17½ bbls. of oil and 5 bbls. of water in five and one-half hours.

J. H. Tatlock No. 10 Berscheit, SE NE NW section 6-20-10w, in the Silica area, made potential of 401 bbls. of oil after acidizing Siliceous lime topped at 3,311 feet; total depth, 3,320 feet. Derby Oil Co. No. 1 Theede, NW cor. section 14-21-7w, in the Hauschild area, made 24-hour potential of 1,154 bbls. It had Chat at 3,360-85 feet, total depth. Hartman & Blair and others No. 1 Schartz "B," SE NE SE section 33-19-10w, an old well, was deepened to 3,335½ feet, made potential of 1,586 feet in 24 hours and was recompleted.

Five new operations were reported in Rice County, as follows: Empire Oil & Refining Co. No. 7 Janssen "A," SE NW NW section 3-18-8w, location; Continental Oil Co. and others No. 1 Diskey, NE NW NE section 24-18-8w, cellar; Phillips Petroleum Co. and others No. 12 Krampe, NW NE SE section 31-19-10w, set 12-inch casing at 200 feet, total depth; Gulf Oil Corp. No. 2 Knop, NE NW NW section 33-19-10w, building rotary rig; Deal Oil & Gas Co. No. 1 McConnell, NW NW NE section 14-21-7w, cellar.

Slick, Pryor & Lockhart and others No. 4 Moran "A," SW NW NW section 4-18-10w, topped Siliceous lime at 3,254 feet, drilled to 3,258 feet and oil rose 900 feet in the hole over night. Seven-inch casing was set at 3,258 feet. J. H. Tatlock was preparing to test No. 9 Berscheit, SW NE NW section 6-20-10w, which had oil in the hole from Siliceous lime at 3,269-81 feet, total depth. Sinclair Prairie Oil Co. No. 3 Specht, NW SE SE section 20-20-10w, had 1,300 feet of oil in the hole from Siliceous lime at 3,292-94 feet; total depth, 3,295 feet; was acidized and waiting.

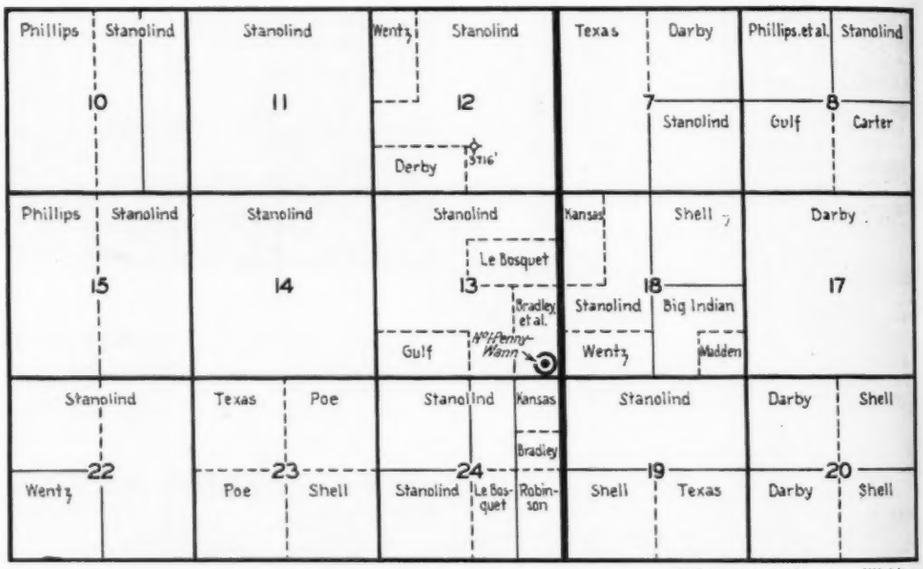
Russell County

It was a quiet week in Russell County, with only three producers completed and one wildcat test abandoned as dry. The largest of the producing wells was the Hartman & Blair No. 3 Rouback "A," SW SE NW section 2-14-15w, which pumped and flowed 3,048 bbls. of oil on potential test. It topped anhydrite at 910 feet; Oswald lime, 3,053 feet, corrected, and was bottomed at 3,059 feet. Empire Oil & Refining Co. No. 7 Crawford, NE SW SW section 2-14-15w, topped anhydrite at 898 feet; Topeka, 2,745 feet; Dodge, 2,985 feet; Oswald, 3,030 feet; Gorham sand, the producing horizon, 3,289-91 feet; total depth, 3,293 feet. It made potential of 1,754 bbls. of oil. Witt No. 3 Witt, SE NE SE section 3-14-15w, made potential of 1,160 bbls. of oil from Gorham sand at 3,292-94 feet, total depth. Top of anhydrite was 900 feet; Topeka, 2,770 feet; Oswald, 3,035 feet.

Armer and others No. 1 Maier, NE NW NE section 20-15-14w, wildcat, had a hole full of water at 3,317 feet, total depth, and was dry and abandoned. Top of anhydrite was 840 feet; Topeka, 2,750 feet; Oswald, 3,050 feet; Siliceous lime, 3,312 feet, steel line measurement.

New work in Russell County: Empire Oil & Refining Co. No. 9 Crawford, SE NW SW section 2-14-15w, building rig; Bridgeport Machine Co. No. 4 Polcyn, SW NW NE section 10-14-15w, moving in material; Saco Oil Co. No. 1 Gurney, SE SW SW section 23-14-14w, material on ground; W. I. Southern No. 6 Sellens, NW NW SW section 29-15-13w, location; same operator's No. 1 Sellens heirs "A," SE SE SW section 30-15-13w, location.

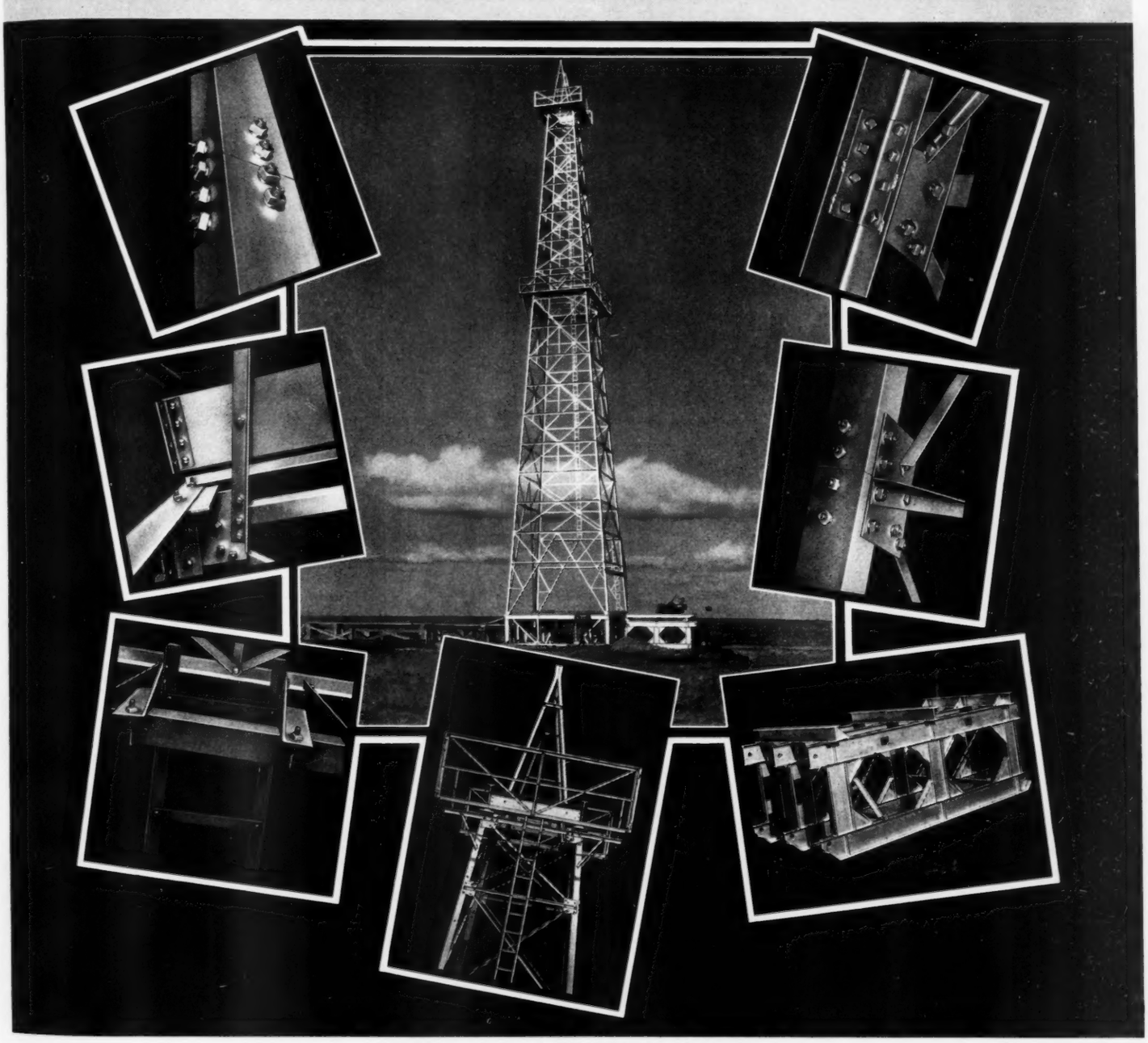
Empire Oil & Refining Co. No. 7 Johnson, NE SW NE section 2-14-15w, had 200 feet of oil in the hole after plugging back from 3,313 feet, total



—Mid-Continent Map Co., Wichita.

Map showing location of the wildcat well that opened the twelfth oil pool in Ellis County, Kansas. It was Bradley Oil Co. and John R. LeBosquet No. 1 Penney-Wann, section 13-15-20w, which pumped 420 bbls. of oil in 22½ hours

M.I.W. STEEL DERRICKS



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depth, to 3,050 feet, and operators were preparing to acidize. It topped Gorham sand at 3,299 feet. Same operator's No. 8 Johnson, SE SW NE section 2-14-15w, topped Oswald lime at 3,064 feet, had first showing of oil at 3,069 feet, produced 124 bbls. of oil on a 24-hour test but was drilling ahead below 3,110 feet. Stanolind Oil & Gas Co. No. 2 Gideon, SW NE NW section 8-15-14w, pumped 20 bbls. of oil and 10 bbls. of water in two hours after acidizing and was cleaning out. It had Siliceous lime at 3,312-19 feet, total depth. Coralena Oil Co. No. 1 L. A. Sellens, NW cor. section 17-15-13w, was bottomed at 2,878 feet and was preparing to acidize after oil rose 2,350 feet in the hole in nine hours. Same operator's No. 3 Trapp, SW SE SE section 30-15-13w, total depth 3,256 feet, flowed at the rate of 100 bbls. an hour during the first 10 hours of potential test.

McPherson County

Ohio Oil Co. No. 3 Decker, SE cor. section 20-21-1w, in the Graber area, McPherson County, was acidized with 3,000 gallons, made potential of 938 bbls. of oil and was completed at 3,327 feet, total depth. Production was from Hunton lime, topped at 3,284 feet, where 5-inch casing was set. Gas gauged 7,000,000 feet at 2,963-68 feet in Chat, topped at 2,907 feet, but gas was killed. Dickey Oil Co. and Gulf Oil Corp. No. 2 Goering, SW SE SE section 17-21-1w, topped Chat at 2,924 feet; Hunton lime, the producing formation, at 3,311 feet; total depth, 3,344 feet. It was acidized with 4,000 gallons, pumped 130 bbls. of oil in two hours and made potential of 824 bbls.

The one new McPherson County test, Derby Oil Co. No. 2 Arnold, NW SW SW section 16-21-1w, was a cellar.

Derby Oil Co. and others No. 1 Arnold, SW cor. section 16-21-1w, produced 9,000,000 feet of gas from Chat topped 2,918 feet, after perforating 8-inch casing at 2,956-68 feet and cementing hole. It had Hunton lime at 3,311-12 feet. Ohio Oil Co. was running tubing to acidize No. 5 Decker, NE cor. section 20-21-1w, after it had pumped 188 bbls. of oil and 50 bbls. of water in 14 hours. It had Hunton lime at 3,293-3,328 feet.

Barton County

National Refining Co. No. 3 McLean, SE SW SE section 25-17-11w, in the Bloomer district, Barton County, made potential of 1,636 bbls. of oil from Siliceous lime at 3,287 feet; total depth, 3,295 feet.

Gulf Oil Corp. No. 3 Zahorsky, SW NW SE section 14-20-11w, in the Silica district, had Siliceous lime at 3,267-87 feet, total depth. After acidizing with 1,000 gallons it made potential of 1,717 bbls. of oil and was completed. Indian Territory Illuminating Oil Co. No. 2 Buchart, C S half S half NE section 14-20-11w, made potential of 147 bbls. of oil after acid treatment. Siliceous lime was topped at 3,280 feet; total depth, 3,314 feet.

Material was on ground for the only new Barton County test reported, the Hilligoss and others No. 6 Isern, NE cor. section 12-20-11w.

Republic Co. No. 2 McLean, SE NW SE section

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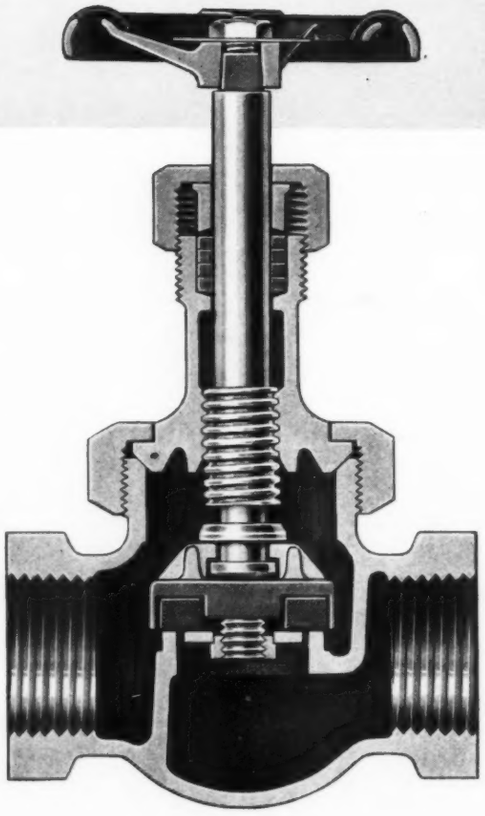

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25-17-11w, flowed 483 bbls. of oil naturally after topping Siliceous lime at 3,280 feet; total depth, 3,281 feet. It was acidized with 2,000 gallons, then flowed 110 bbls. of oil the first hour and 94 bbls. the second hour and was testing.

Sumner County

Elbar Oil Corp. No. 8 Erker, C S half S half NW section 33-31-1w, in the Wellington area, Sumner County, made potential of 920 bbls. of oil and was completed at 3,676 feet, total depth, after acid treatment. Production was from Chat topped at 3,648 feet. Tom Palmer and others No. 1 Hull, NW NE SW section 9-32-1w, was dry and abandoned at 3,754 feet, total depth. Location was west of the town of Wellington. Kansas City lime was topped at 3,010 feet; Chat, 3,666 feet. Water intruded at 3,678-81 feet.

The only new test in Sumner County, was Texas Co. No. 1 McKee, NE cor. section 5-32-1w, a location.

S. J. Buffington No. 1 Payne, C SW NE section 10-35-2, wildcat in southeastern Sumner County, near the Oklahoma line, had sand at 1,544-45 feet, total depth, and was setting 5-inch casing. Gas was estimated at 1,000,000 feet.

Ellsworth County

James Davis No. 4 Edwards, SW NW SE section 34-17-8w, southern Ellsworth County, made potential of 1,124 bbls. of oil after acidizing and was completed in Siliceous lime at 3,247-60 feet, total depth. It pumped 511 bbls. of oil before acidizing. Kansas City formation was topped at 2,870 feet. No new work was reported in the county.

Carter Oil Co. No. 6 Ogden C-39, SW cor. section 26-17-9w, topped Siliceous lime at 3,170 feet; total depth, 3,174 feet. Oil rose 2,800 feet in the hole in two hours but it had not been tested.

Butler County

Vickers Petroleum Co. No. 1 Brenner, C E half SE NW section 2-25-3, the only Butler County completion, topped Chat at 2,708 feet, water intruded at 2,721 feet and it was dry and abandoned at 2,735 feet, total depth. No new work was reported.

Marion County

Empire Oil & Refining Co. No. 1 Schmidt, NW NW SE section 31-20-2, Marion County wildcat, topped Chat at 2,699 feet; Viola lime, 3,078 feet; water intruded and it was dry and abandoned at 3,186 feet, total depth.

Barber County

Vaccars Corp. No. 1 Swartz, SE cor. section 30-31-11w, in the Whelan area, Barber County, was putting in pumps and rods and after pulling tubing and agitating was to test. It topped Chat at 4,304 feet and after penetrating pay at 4,315-16 feet, total depth, began flowing by heads. On last report it flowed 58 bbls. of oil in one hour and then, after five hours, flowed 60 bbls. in one hour. Estimates of ultimate production vary, some ranging as high as 1,000 to 1,500 bbls.

Ellis County

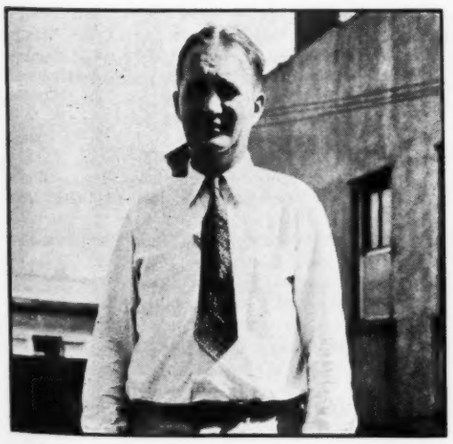
It was a quiet week in Ellis County, with no completions and only one new test starting. Gulf Oil Corp. was moving in material for No. 1 Alex Klaus, SW SW NE section 26-14-19w.

Uscan Oil Co. No. 5 Bemis, NW NE NE section 21-11-17w, pumped 1,507 bbls. of oil in 24 hours and was to retest. It topped Siliceous lime and set 7-inch casing at 3,339 feet; total depth, 3,342 feet.

Reno County

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 3 Hilger "A," NE NW NW section 16-26-4w, Hilger pool, total depth 4,041 feet, flowed 288 bbls. of oil naturally in 24 hours through casing and was running tubing.

There were no completions in Reno County but



F. W. Shelton, district foreman, Phillips Petroleum Co., Great Bend, Kans.

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work was started at two new tests. Sinclair Prairie Oil Co. No. 4 Seedle, NE SE NE section 17-24-4w, was moving in tools. Magnolia Petroleum Co. No. 4 C. Harris, NW NW SW section 9-26-4w, was digging cellar.

Harvey County

Western Kansas Oil & Refining Co. No. 1 Dettweiler, C E half SE NE section 2-23-2w, was building rotary rig. It was the only new work reported in Harvey County.

Forrest L. Dunn, district production foreman, Continental Oil Co., Geneseo, Kans.

Greenwood County

The single new test reported in Greenwood County was Ohio Oil Co. No. 7 Pixley, SE SW NW section 8-22-10, which was rigging up.

Cowley County

Location was announced for one new Cowley County test. It was the McKnabb No. 1 Charles, NE NE SE section 20-32-5, in the Winfield district.

Crude Oil Stocks

Stocks of domestic and foreign crude petroleum for the week ending September 19 totaled 297,925,000 bbls., according to the Bureau of Mines, a decrease of 498,000 bbls., comprising a decrease of 540,000 bbls. in stocks of domestic crude but an increase of 42,000 bbls. in stocks of foreign crude. Daily average imports declined from 125,000 bbls. to 75,000 bbls. Daily average crude runs to stills were about 3,035,000 bbls., which, although 85,000 bbls. below the level of the week ending September 12, was considerably above the average runs of July and August.

Grade of crude oil—	Sept. 12	Sept. 19
Pennsylvania Grade	4,145,000	4,117,000
Other Appalachian	786,000	696,000
Lima-N.E. Indiana-Michigan	1,072,000	1,136,000
Illinois-S.W. Indiana	10,086,000	10,081,000
N. Louisiana and Arkansas	10,757,000	10,639,000
West Texas and S.E. New Mexico	29,418,000	29,325,000
East Texas	20,370,000	19,749,000
Other Mid-Continent	118,829,000	118,712,000
Gulf Coast	27,392,000	28,030,000
Rocky Mountain	25,738,000	25,716,000
California	30,959,000	30,836,000
Foreign	2,521,000	2,563,000
Total reported weekly	282,073,000	281,600,000
Estimate of unreported stocks	16,375,000	16,350,000
Total stocks	298,448,000	297,950,000

Gulf Coast Fields

(Continued from Page 62)

is the second deep production to be found within recent months around the flanks of this old field and it is located about 4,750 feet northwest of Shell Petroleum Corp. No. 1 Conover which was completed at 7,350 feet.

The completion of No. 1 Leckett adds additional activity for the field and the rig will be moved about a half mile north for a second test on the Fontenot lease. A second rig will be moved to the Jennings-Heywood lease composed of 116 acres. No. 1 Leckett is located 1,050 feet north and 295 feet west of the SE corner of the NE quarter of section 42-9s-2w.

Progress on two of the district's most interesting wildcats are being held up due to fishing jobs. At the Abbeville Prospect, Vermillion Parish, Continental Oil Co. was cutting and pulling drill stem stuck at the bottom of hole at 11,732 feet when the well tried to blow out after 5 feet of gas sand had been cored. On the South Jennings Prospect, Stanolind Oil & Gas Co. No. 1 Calcasieu National Bank is bottomed at 9,944 feet and the operators are cutting and pulling the drill stem which became stuck when circulation was lost due to excessive gas pressure. The last string of protection casing was cemented at 8,899 feet. The well is located on a block of 6,500 acres in section 15-10s-3w and due to the numerous showings of oil and gas recorded on electrical coring surveys, it is conceded by many to be a pool opener.

Shell Petroleum Corp. No. 1 Colonial Sugar which uncovered the Hester Salt dome in St. James Parish has been abandoned after being shutdown for several months and the operators are moving in material for No. 2 Colonial Sugar located 4,800 feet north of No. 1 in section 5-12s-5e. The first test encountered numerous showings above the salt which was topped at 7,492 feet and drilled to 7,522 feet.

Six miles southeast of Lake Charles near Holmwood in Calcasieu Parish, J. Elmer Thomas is moving in material for his No. 1 Farmers Land and Canal Co. located on a block of 4,500 acres in section 20-10s-7e.

Gulf Oil Corp. is moving in material for two interesting wildcats. On the Bay Adams Prospect, No. 1 State is located 1,600 feet west and 640 feet south of the southwest corner of section 28 in section 32-19s-28e. On the Lake Lery Prospect, St. Bernard Parish, No. 1 Lake Lery is situated 3,433 feet west and 100 feet south of the southeast corner of section 28-14s-14e.

Louisiana-Arkansas Fields

(Continued from Page 64)

drilling in dark sand and black shale, 7,228 feet.

J. S. Morrisey No. 1 Jones, SW cor. section 15-18-7e, was dry at a depth of 3,260 feet, contract depth, and has been abandoned.

Sabine Parish

Cox and Whitehurst No. 1 Whitney Corp., section 8-9-13, deep test of the Converse pool, which blew in for a wild flow estimated at 50,000,000 feet, has now been partially brought under control, while operators prepare to run casing and test. Production is coming from the Oolitic lime of Lower Glen Rose, and this well is highly regarded as a deep field opener. Total depth is 5,503 feet.

Union Parish

The vast Monroe gas field structure lost its chance of a thorough deep test when Federal Petroleum Co. officials concluded that they had a lost hole after drilling to a depth of 7,021 feet and encountering a 5,000,000-foot gas show. They shot drill stem in two at 2,550 feet, and plan to cement the well back to the Monroe gas rock and complete the well in this horizon. No announcement has yet been made for another deep test of the Monroe structure.

ARKANSAS

Columbia County

Freeman Buford & Co. No. 1 Kendricks, NE SE section 7-19-18, deep test on geophysical high, is now drilling below 4,150 feet without encountering important markers.

Dallas County

A. F. Tarver No. 1 Wilbon, NE NE SE section 21-9-13, encountered Paleozoic rocks lacking both porosity and saturation, and has been abandoned at a depth of 3,056 feet.

Hempstead County

Easton and others No. 2 Conway-Tiller, SW SW section 34-12-27, important test of shore line possibilities near McNab, Ark., has been forced to shut down on account of high water at a total depth of 3,005 feet in an upper sand member of the Travis Peak.

Imperial Oil Products Co. No. 1 Foster, section 35-12-26, to the east of Easton's test, is coring Oolitic lime at 2,459 feet, after obtaining a 3-foot saturated core from 2,279 to 2,282 feet.

High water from Red River is retarding progress of the other three tests of this same general area.

Nevada County

Benedum & Trees No. 1 Groves, SE NW section 10-14-20, took drill stem test from 1,960 to 1,990 feet, but found the section to be dry. Drilling continued.

Ouchita County

Five of the deep Reynolds lime (Permian) wells drilled at Snow Hill, northern flank of Smackover field, are now on production, making oil, distillate and gas. Many operators have been forced to purchase gas for their shallow field operations during the last few years, and the gas from these deep wells has been most useful.

Lion Oil Refining Co. No. 1 Berg is flowing 55 bbls. oil and 400 bbls. water daily, with about 5,500,000 feet of gas. Tubing pressure 1,155 pounds, casing pressure 1,525 pounds.

Phillips Petroleum Co. No. 1 Harris is making 18 bbls. of 68 gravity distillate and 15 bbls. water daily, with 2,200,000 feet of gas. The same company's No. 1 Arnold is flowing through one-half inch choke at the rate of 81 bbls. daily, 2 per cent salt water, with 2,000,000 feet gas, tubing pressure 826 pounds, casing pressure 920 pounds. The same company's No. 1 Reynolds is on the pump, producing 218 bbls. of fluid daily, about half oil and half water.

Standard of Louisiana No. 1 Reynolds is flowing 36 bbls. of fluid daily, 6.2 per cent of which is water. About 4,000,000 feet of gas is being produced here.

EAST TEXAS (Border Counties)

Harrison County

W. F. Bridwell No. 1 Clapp (Overtex Oil Co.) in the F. C. Baker Survey, 1 mile north of Latex, has been shut down at 5,167 feet for orders. It has been reported that operators are moving the heavy rig from this location.

Panola County

After coring some lime with apparent porosity, Gulf Production Co. made drill stem test on their No. 1 Pierce and Chesbro, Lower Trinity test on the J. H. Shahan Survey, from 5,120 to 5,138 feet, showing 160 feet of mud and salt water in 15 minutes. They are now drilling ahead below 5,150 feet.

A. C. Glassell No. 1 Frost Lumber Co., Mary S. Potts Survey, which gave first indication of porous and saturated Lower Glen Rose in Panola County, is drilling ahead at 5,980 feet, expecting the top of the Travis Peak at any time. Should the upper sand members in this formation prove nonproductive, the well will be plugged back for a thorough test of the Lower Glen Rose showings previously reported.

Bowie County

The Stanolind Oil & Gas Co. has taken 1,050 acres just north of Jennings in the J. Priestly, T.&P. Surveys Nos. 14, 15 and 16, paying from $3 to $10 for 10-year leases, following extensive seismograph work on these properties. Stanolind is continuing its geophysical work near Maud.

Shelby County

Leasing continues on an increasing scale in Shelby County, much of it stimulated by the recent Glen Rose gas-distillate completion in the northeast corner of the county. Two miles southeast of Shelbyville, Hunt Production Co. took 350 acres in the William English Survey. This same company is taking additional acreage to the southeast of here. Gulf Production Co. is reported to be adding to their holdings in this area.

Three geophysical crews are now known to be working in Shelby County, sponsored by Sun, the Texas Co. and Amerada.

Stanolind Oil & Gas Co. recently leased 1,800 acres solid, and 2,000 acres scattered north of Center on the Hezekiah, McKelvy, Jno. Forsythe and Scarborough Surveys.

California Field Report

By
L. P. STOCKMAN

CUT IN PRODUCTION NEEDED TO CONTINUE STABILIZATION

LOS ANGELES, Calif., Oct. 5.—California's official curtailment committee fixed the allowable daily crude oil production of the state at 544,000 bbls. for October, 8,700 bbls. per day in excess of requirements as indicated by the U. S. Bureau of Mines. While the Central Committee of California Oil Producers approved the allocation committee's recommendation that the October quota remain unchanged, L. L. Aubert reminded operators that as the winter months advanced this practice of a uniform average quota would be increasingly difficult to maintain unless those areas which show a consistent excess production swing into line. The September production is expected to show a material decrease over August but the balance of supply over demand will show little change. Conditions in the Lake View section of the Midway-Sunset field of Kern County, where the plan to shut in 10,000 bbls. daily the last 10 days of each month was partially disrupted in September, are such to give rise to serious concern. Chairman Lawrence Vander Leck, however, reported readjustments were under way which, it is hoped, will make the program effective in October. This 100,000-bbl. shut-in for the Lake View area has an extremely important bearing on the success of the state's curtailment efforts. A report from the Coffee Canyon and Edison areas says that former curtailment problems have been satisfactorily settled.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Sept. 20		Sept. 13			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	151,541	527,098
Gasoline	.....	.....	114,862	16,409	4,897,525	5,777,286
Kerosene	79,455	11,351	.....	.....	968,157	753,457
Foreign exports:						
Crude oil	105,284	15,041	520,175	74,311	7,110,406	9,800,496
Fuel oil	493,398	70,485	239,450	34,207	7,753,742	8,953,515
Diesel and gas oil	14,134	2,019	87,547	12,507	4,222,153	3,423,079
Gasoline	337,329	48,190	70,972	10,139	5,491,572	4,890,489
Kerosene	58,057	8,294	44,733	6,390	1,146,338	956,477
Other unfinished oil	.....	.....	.....	.....	132,908	99,847
Coastwise-domestic:						
Crude oil	128,746	18,392	114,681	16,383	4,860,458	4,589,885
Fuel oil	461,484	65,926	64,957	9,280	7,546,410	7,210,133
Diesel and gas oil	.....	.....	.....	.....	867,958	675,801
Gasoline	143,952	20,565	195,241	27,892	9,273,301	8,287,931
Kerosene	.....	.....	.....	.....	138,814	142,842

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	.....	158,152
Gasoline	.....	.....	.....	.....	227,419	.....
Kerosene	.....	.....	.....	.....	.....	149,715
Asphalt	.....	.....	69,134	9,876	267,431	420,414
Lubricants	.....	.....	.....	.....	38,131	45,620
Foreign exports:						
Crude oil	.....	.....	97,247	13,892	2,325,466	1,838,964
Fuel oil	63,455	9,065	38,765	5,538	2,054,397	1,673,594
Diesel and gas oil	16,330	2,333	47,441	6,777	1,398,641	855,891
Gasoline	.....	.....	334,896	47,842	2,760,325	2,113,509
Kerosene	.....	.....	4,016	574	546,419	597,608
Lubricants	.....	.....	21,867	3,124	268,440	156,238
Other unfinished oil	.....	.....	.....	.....	90,923	.....
Coastwise-domestic:						
Fuel oil	189,008	27,001	78,509	11,216	4,934,748	4,888,399
Diesel and gas oil	.....	.....	34,542	4,935	515,382	175,932
Gasoline	43,961	6,280	162,187	23,170	3,686,365	3,247,567
Kerosene	.....	.....	20,471	2,924	141,580	76,785

May Lift Restrictions

A special election has been called at Redondo Beach for October 20 to vote on a proposition to permit the drilling of wells on 50 acres of potentially productive oil land in the salt pond area. The election is being sponsored by Kenneth Walsh, president of Walken Petroleum Co., which has completed three wells on the city sewer farm. The measure to be voted on provides for the payment of a 2½ per cent royalty, in addition to landowners' royalties, to the city of Redondo. It is estimated that development of the salt pond area should bring the city new revenue of more than $15,000 annually from the upper zone, with possible additional revenues if a deep sand is found.

Important Decision

Drawing a close distinction between drifted oil wells and those intentionally whipstocked, Superior Judge Palmer in Los Angeles recently rendered a decision in favor of the Bell View Oil Syndicate, defendant, in an action involving $3,500,000 brought by the Alphonzo E. Bell Corp., owner in fee of several hundred acres of productive oil land in the Santa Fe Springs field of Los Angeles Basin. The Bell corporation charged that the Bell View Oil Syndicate, having a town lot drilling site, had permitted two wells to drift beyond its own property lines and to have become bottomed under property of the corporation, leased to another oil company. The plaintiff corporation asserted the defendants had produced oil from the wells to the value of $3,500,000, and sought to recover it. Judge Palmer ruled that the wells were drilled in 1928 and 1929 and that the three-year statute of limitation applies to such actions and, further, that the plaintiff had not shown sufficient facts in respect to being diligent in the protection of its interest during the time which has intervened since the drilling of the wells in question. The court sustained the demurrer of the defendants without leave to amend. In his decision the judge held that a complaining party must show not only that the neighboring wells drifted but that the defendant also had produced more oil because of the drift and that the complaining party would have produced more oil had it not been for the conduct of the defendant.

Midway-Sunset

The Midway-Sunset field of Kern County is showing a surprising increase in drilling operations and recent developments indicate that a further substantial gain may be anticipated during the course of the next several months.

Quality Oil Co. No. 3 Bull, completed last week pumping 540 bbls. of relatively clean 18.1 gravity oil per day from 2,150 feet, has shown a consistent increase in production and is producing 1,090 bbls. daily from the original completion depth. Frank Goldman No. 3 Keene, in section 22-32-23, was completed pumping 605 bbls. of 18.8 gravity oil daily from 2,122 feet. This well was put on the beam without bailing the hole and production may show a substantial increase after the well has been on production a short time. New wells started in the Midway-Sunset field during the past fortnight include the Alford Oil Co. No. 6 Fried in section 25-12-24, Associated Oil Co. No. 7 in section 35-31-22, Berry & Ewing No. 3 in section 21-32-24, Burkholder Oil Corp. No. 2 Orloff in section 23-32-23, Chanslor Canfield Midway Oil Co. Nos. 20, 21 and 24 in section 21-32-23, Gibson Oil Co. No. 2 Francis in section 6-11-23, Honolulu Oil Corp. No. 6 in section 14-32-24, Merritt-Annex Oil Co. No. 2 Fried in section 25-21-24, North American Oil Co. No. 4 in section 2-32-24, Quality Oil Co. No. 3 Cypress in section 22-32-23, Shepard Oil Co. No. 1 in section 12-11-24 and the Twentieth Century Oil Co. No. 1 Gilmore in section 1-11-24.

Carl Zamloch has picked up an excellent looking oil sand in his No. 1 Sunset in section 22-32-24 at the present depth, 2,135 feet. Frank Goldman's completion is the most interesting development in the Midway-Sunset field as it was drilled on a long narrow strip which did not exceed 40 feet in width. By extremely careful drilling Frank Goldman has apparently kept this hole as close to the vertical as possible to keep it inside the confines of the Keene lease.

Padre Canyon

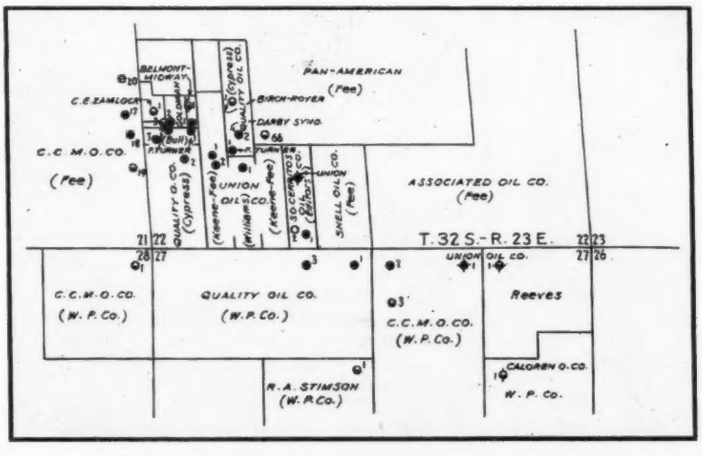
The Javon field of Ventura County, discovered over a year ago by Continental Oil Co., is designated as the Padre Canyon oil field of Ventura County. This change has been officially made by Continental Oil Co.

Continental Oil Co. is coring streaks of oil sand in No. 2 Hobson, its second well in the Padre Canyon field, and should be tanking oil within the next 30 days.

Capitan

Shell Oil Co. finished an excellent well in the Capitan field of Santa Barbara County when No. 4 Orella was brought in pumping 390 bbls. of exceptionally clean 20.9 gravity oil per day from 1,758 feet. This well, which was finished with an 8⅝-inch water string landed and cemented at 1,704 feet, has built up to 420 bbls. per day since completion and gravity of the oil has increased to 21 degrees. On the Erburu property, General Petroleum has spudded in No. 19 and should have this project ready for a production test within another

(Continued on Page 99)



A section of the Midway-Sunset field of Kern County now undergoing aggressive development

Eastern Field Report

By STAFF CORRESPONDENT

FORTY-FIVE COMPLETIONS IN PENN GRADE SOUTHERN AREA

PITTSBURGH, Pa., Oct. 5. — Forty-five wells were completed in southwestern Pennsylvania, southeastern Ohio and West Virginia in the past week in review of which 17 were oil wells, 20 were gas wells and five were dry holes.

SOUTHEAST OHIO

In section 25, Wayne Township, Columbiana County, Ohio, Natural Gas Co. of West Virginia reached the top of the Corniferous lime at about 4,173 feet on the William Grafton farm. The hole is caving. In Madison Township, this company is moving rig to the test on the Ketchum farm north of the Jenkins well. The Ketchum test, now standing in the Berea sand, will be drilled to the Oriskany.

In Athens County, Robinson and others completed a test on the W. Reeves farm near Albany in Fraction 5, Lee Township, in the Brown shale at 2,415 feet. It is a small gas well gauging 60,000 feet a day. In section 16, same township, the Albany Gas Co. completed a test on the H. Peacock farm in a stray sand at 373 feet as a gas well gauging 30,000 feet a day.

In Belmont County, Union Gasoline & Oil Corp. completed No. 6 Albert Smelko in section 26, Richland Township. It is good for 5 bbls. a day after shot in the Berea sand at 1,740 feet. In the southeast quarter of this section, Frank A. Eberting completed a 1-bbl. well on the Gustav and Rosie Hall farm in the Berea sand at 1,682 feet.

In Gallia County, Ohio Fuel Gas Co. on the W. C. Reed farm in section 14, Cheshire Township, drilled through the Lime to a depth of 3,420 feet. There was a showing only of oil and gas at this depth and the well is abandoned.

In Jefferson County, Everett Ferguson and others completed No. 3 Alva D. Gall in section 30, Saline Township. It is a Berea sand producer at 770 feet, making 1 bbl. a day after the shot.

In Knox County, J. B. Reed, on the May Rice farm in Berlin Township, drilled through Clinton sand to 2,490 feet. It had a light showing of oil and gas and may not be shot. In the NE quarter of section 23, Madison Township, George H. Long completed No. 6 Eliza J. Fulton in Berea sand at 793 feet. It produced 5 bbls. the first day after shot, but is showing for a 1-bbl. pumper. In section 14, Perry Township, the Rutledge & Mossholder Lease Co. completed No. 6 Ethel Frost in Berea sand at 658 feet. It produced 9 bbls. the first day after the shot.

In Licking County, the Edward H. Everett Co. No. 13 Felix Montgomery, section 2, Hanover Township, was dry in Clinton sand and abandoned at 2,970 feet.

In Medina County, E. R. Edson & Son Co. on the Jacob Kruggel farm, Tract 17, Lot 3, Chatham Township, was drilled through Berea grit to 552 feet. It was dry.

In Monroe County, F. S. English and others completed No. 3 C. E. English, section 24, Washington County, in Injun sand at 1,509 feet. It produced 30 bbls. the first day, naturally.

In Muskingum County, Pure Oil Co. completed No. 5 C. H. Wright, in Licking Township in Clinton sand at 2,974 feet. It produced 70 bbls. the first day after shot. Newton Township, Ohio Fuel Gas Co. completed a 1,000,000-foot gasser on the John Hansen farm (mapped D. T. and L. A. Llewellyn) in Clinton sand at 3,470 feet.

In Perry County, Perry Sturm and others drilled dry hole on the King and Grigsby farm section 14, Reading Township, through the Clinton sand to 3,302 feet. It was abandoned.

In Washington County, Hune Brothers and others on the M. G. Eddy farm in section 34, Independence Township, have a natural 2-bbl. well in Salt sand at 980 feet. In section 32, Aurelius Township, David Ripley drilled No. 4 fee through the Macksburg 700-foot sand and it was dry, total depth 833 feet.

SOUTHWEST PENNSYLVANIA

Three wells were completed in Southwest Pennsylvania during the week, one a fair producer. In Center Township, Greene County, the Carnegie Natural Gas Co. completed the test on the J. W. Milliken farm in the Nineveh Thirty-foot sand at about 3,250 feet and it flowed 120 bbls. the first 10 hours. The second day it produced 85 bbls. This well is north of the 65-bbl. well on the Mattie I. Scott farm, completed last week. North of the Milliken farm, the South Penn Oil Co. recovered the tools in No. 9 Harvey, lost on top of the Thirty-foot sand. The well will be drilled in during the week.

In Amwell Township, Washington County, the Union Gasoline & Oil Corp. completed No. 3 A. O. Vankirk in the Fifth sand at 3,080 feet with an oil showing at 3,053 feet. It is the smallest of the pool and is making 2 bbls. a day.

The Greensboro Gas Co. completed a gas well on the Israel Barkley farm in Monongahela Township, Greene County, at 1,195 feet. Little Dunkard sand was at 845-897 feet with 331,000 feet of gas at 897 feet and the gas sand at 1,110-1,195 feet, with gas at 1,187 feet. The total gauge is 500,000 feet a day.

In Amwell Township, Washington County, the Union Gasoline & Oil Corp. is drilling at 2,523 feet on the Marion C. Johnson farm; running casing to 2,758 feet in the test on the Stephen Day farm; and rigging up on the Martha Hazlett farm. The South Penn Oil Co. is down 1,810 feet on the J. Q. Zimmerman farm. A. V. Lewis and others have reached 2,010 feet in the No. 2 on the W. Dodd farm and 690 feet on the Mankey farm. Moore-Walker and others are drilling at 1,385 feet on the G. L. Walker No. 8.

In Greene County, Charles Mong has rigged up for a test on the A. J. Lippincott farm in Franklin Township. In Richhill Township, the Carnegie Natural Gas Co. is down 2,960 feet on the W. O. Kincaid farm. Here the Equitable Gas Co. is down 2,046 feet on the Rachel McDonald farm. Smith McCracken is drilling at 2,485 feet on the Homer King farm.

H. D. Freeland & Co. has reached 1,700 feet on the D. L. Freeland farm in Wayne Township, Greene County.

Deep Tests

The test of William Snee and others on the Summit Hotel property on Chestnut Ridge in South Union Township, Fayette County, is now 4,575 feet deep drilling in a new hole with spiral bit and stem. It is hoped that the new hole will meet the old hole when the crooked part is passed. Gas is still coming from the old hole bottomed at 6,611 feet.

In Mount Pleasant Township, Washington County, Norwood Johnston and others have recovered one set of tools lost in the test on the James McBurney farm at a depth of 6,160 feet.

In Independence Township, Beaver County, the test of Laughner-Wittmer on the William Wilsman farm is drilling at 3,100 feet. There is a report of another test about to be drilled in this county.

In Slippery Rock Township, Lawrence County, the deep test of the Carnegie Natural Gas Co. on the Heichel farm is drilling at 1,270 feet. One mile north of Zelienople, in Butler County, the Wittmer-Phillips test on the Paul Fanker farm is down 1,900 feet.

WEST VIRGINIA

Several oil wells were completed in West Virginia during the week. In Calhoun County, the Metz Farm Oil Co. has a 15-bbl. well on the Peter Metz farm in Sheridan district in the Salt sand at 1,640 feet.

In Clay County, the South Penn Oil Co. completed No. 110 O. D. Stockley, in Henry district, in the Injun sand at 2,200 feet. It is rated at 10 bbls. a day.

In Gilmer County, Hamilton & Coleman Oil Co., Inc., and others No. 3 on the A. Gainer heirs farm in DeKalb district was good for 5 bbls. a day in the Injun sand at 1,810 feet.

In Kanawha County, A. E. Cavender and others completed a 5-bbl. well in No. 3 Harless in Elk district in Weir sand at 1,824 feet. It also produces 200,000 feet of gas.

In Ritchie County, Moats & Richards completed No. 2 Lucretia Ross, Grant district, in Maxon sand at 1,857 feet. It is good for 10 bbls. a day.

In Wetzel County, the Carnegie Natural Gas Co. has a 1-bbl. pumper in No. 4 A. Bartrug, in Church district, at 2,150 feet, Maxon sand.

Gas Wells

In Braxton County, the Pittsburgh & West Virginia Gas Co. completed a test on the W. L. Hopkins farm in Birch district at a total depth of 3,120 feet as a small gas well.

In Cabell County the Pauley Gas Co., on the J. D. Hatfield farm in Guyandotte district, has a new well gauging 1,250,000 feet a day at 2,651 feet. In McComas district, R. H. Adkins and others test on the Polly Swann farm was completed at 3,150 feet. Here the gas was found at 2,022-25 feet; Brown shale, 2,400 feet, with gas at 2,550 feet. The gauge is 126,000 feet a day.

In Clay County, the Virginian Gasoline & Oil Corp. completed No. 4,668 on the Brown, Swan, Goshorn & Geary tract in Henry district in the Injun sand as a gas well gauging 425,000 feet a day. The total depth was 1,889 feet. In Pleasant district, S. M. Vockel and others have a dry hole on the H. Reed heirs farm at 1,580 feet.

In Kanawha County the Pure Oil Co. completed No. 2 Cheylan Coal & Land Co., Cabin Creek district, in Berea sand at 2,873 feet. It gauges 1,108,800 feet a day.

In Lincoln County the Harvard Gas Co. completed No. 5 Lincoln Mineral Co., Washington district as a gas well gauging 53,136 feet a day from a total depth of 4,169 feet. Brown shale lay at 3,041-4,169 feet, with gas at 3,074-3,680 feet.

In Raleigh County, Godfrey L. Cabot, Inc., test on the Rock House Fork Coal & Land Co., in Trap Hill district, is a gas well gauging 250,000 feet. The Maxon sand was at 2,090-2,155 feet, with gas at 2,112-43 feet. The hole was bottomed in slate at 3,245 feet.

In Roane County, L. C. Young and others test on the John and Rex Lee 41-acre tract in Harper district is a gas well in the Salt sand, gauging 8,000,000 feet a day. The top of the Salt sand was 1,736 feet, with the gas at 1,754 feet and the total depth 1,764 feet. In this district, L. L. Reed and others drilled a test on the J. R. Bonnett farm through the Salt sand to 1,625 feet. It was dry.

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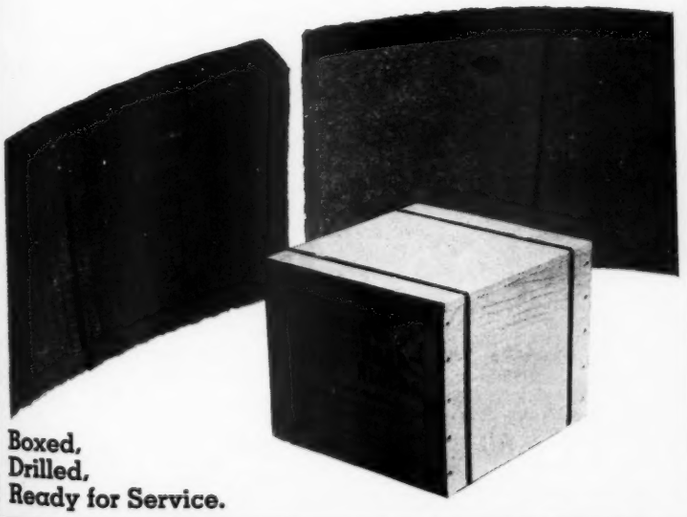

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STAR DRILLING MACHINES

East and East Central Texas

By
L. E. BREDBERG

HUMBLE SHIPPING OIL FROM TALCO; RAIN AIDS DRILLING

DALLAS, Tex., Oct. 5.—The Talco pool in northwest Titus and northeast Franklin Counties witnessed the running of its first oil through a direct pipe line outlet this week when oil was started pumping from the Humble Oil & Refining Co.'s two 55,000-bbl. tanks in the field through the company's 8-inch line to Longview station where it connects with the Humble Pipe Line Co.'s trunk line from the Van field to the Standard Oil Co. of Louisiana's refinery at Baton Rouge, La. The company is paying 60 cents for the oil, which is of low gravity and high sulphur content.

The pool may soon receive a second pipe line outlet if plans now in preparation materialize. Dudley S. Golding and Clint Murchison, officers of the American Liberty Pipe Line Co., which has an 8-inch carrier from the East Texas field via Conroe to the Houston ship channel, are planning on laying a line from the Sulphur Bluff pool 18 miles southwest of Talco, via Talco, thence south and east to the East Texas field to connect with the 8-inch line to the coast. This would give the two pools their first Gulf Coast outlets and also give the Sulphur Bluff pool its first outlet, as not even a line to a loading rack is running oil from the two wells in the pool in Hopkins County.

Capt. J. F. Lucey, president of the Talco Pipe Line Co., and associates plan to erect a cracking plant, reported to cost in the neighborhood of $350,000, to process crude from the Talco pool. Location for the plant will probably be in Mount Pleasant or Mount Vernon.

With a line slated for the Sulphur Bluff pool, 16 locations are expected to be staked in that pool in Hopkins County within the near future. The oil from the two wells producing is being run into steel storage tanks. There is one well drilling in the field.

Outpost Possibilities

Humble Oil & Refining Co. No. 1 Williams, located in the George Medlin Survey, a mile west of a dry hole at 4,508 feet drilled by Stroube & Stroube a month ago on the Strutton lands, in the M.E.P.&P. Survey, appears as having good chances for making an oil producer from the Paluxy sand, producing member in the pool. If it proves a producer it will extend the field about 1½ miles to the east, and the company has already staked three offsets to the test, having faith in its successful outcome. It cored three feet of saturated sand at 4,208-11 feet, and was shut down to set 7-inch casing at about 4,205 feet before testing.

Recent heavy rains have been a boon to the operators in the Talco pool, replenishing the depleted supply of drilling water so that shutdown rigs have been able to start and more rigs have become active in the pool. Four locations were staked on the Franklin side of the pool and nine on the Titus side.

Wildcatting

Another wildcat is scheduled to be drilled in Hopkins County in the near future by George B. Ore of Oklahoma City, who has assembled a block of 5,000 acres 5 miles northwest of Sulphur Bluff, and located in the John Bowland, Pierce, Evans and Charles Carter Surveys. It will be drilled in quest of Paluxy sand production.

The O. J. Oil Co., composed of Tom B. Owens of Fort Worth and John L. Joiner of Dallas, is planning a 5,000-foot test in northeastern Fannin County, where the company has taken 3,500 acres in leases, the block extending over into Oklahoma. Material is being moved in and the test is to spud by October 14. The location is considered to have good chances for making production from the Simpson series. H. D. McClure, who previously geologized the Sulphur Bluff and Talco areas, geologized this block in Fannin.

Roger Stewart and the Velvet Oil Co. have completed plans for a wildcat 4 miles north of Fairfield in Freestone County, location to be on lands of E. H. Beauchamp, E. Green Survey, on a block of 1,000 acres which has been shot by several seismograph crews. Peyton Brothers of Mexia are to drill the test, which is to get under way by October 13.

Wheelock & Collins of Corsicana are selling spreads in a block of 8,000 acres assembled southwest of Fairfield in the same county, by Stewart and Watson of Fairfield. A test is expected to start on this block in the near future.

Talco Allowable

On October 1 the Railroad Commission set a tentative daily allowable of 6,168 bbls. for the Talco pool. On September 10 there were 25 pumping wells and 39 flowing wells in the Talco pool, but since that time about 20 wells have been completed. Fifty-one of the wells were making clean oil and 13 were making an average of 2½ per cent salt water, the highest yield of any of the wells being 8 per cent salt water. The bottom hole pressure of the first wells was around 1,850 pounds, but the average has dropped to from 1,650 to 1,750 pounds. There is little gas in the Talco or the Sulphur Bluff pool to the southwest, but apparently there is a good water drive in both.

Shell to Drill

The Shell Petroleum Corp., which recently contracted to sell gas from its wells in the Buffalo gas pool in Leon County to the Lone Star Gas Co., is expected to start another drilling program in that area soon, drilling one gas well to each 160 acres. If oil is struck in any of the wells (and some of them are now producing distillate), the company will then step out and develop the pool on a different basis, although gas will no doubt continue to be sold to the Lone Star, which is also taking gas from the Cayuga and Long Lake fields in Anderson County, and the Red Lake area in Freestone County. The Lone Star will lay a line into the Buffalo area to connect with the gas wells in that pool.

Cherokee Test

A. F. Richardson has staked location for a 5,000-foot test on the F. P. O'Brien tract, in the G. S. Clapp Survey, 3 miles northwest of Rusk in Cherokee County. This location is about 8 miles north of the small Rusk pool and will be an interesting test, although little attention has been given this area since the wild lease and royalty play was made three years ago when the pool was discovered and when several million dollars were soon spent in the area without returns. The wells and pool proved exceedingly disappointing.

Six miles southeast of the town of Lott in Falls County, the Thirteen Oil Co. is moving in material on the H. R. Roberts lands, N. Slatter Survey. Another shallow test for Angelina County is being drilled by T. L. Harris and others on fee lands, in the Eli Gilliland Survey, 4½ miles northeast of Huntington. The company has abandoned its first test in this area at a total depth of 1,344 feet. Elevation is 232 feet. No showings of oil or gas were reported.

East Texas Field

The allowable of the East Texas field from 21,418 wells on September 30 was 436,705 bbls., based on an hourly potential limit of 2.32 per cent per well. The hourly potential of the field is rated at 13,103,180 bbls., with 16,070 wells listed as marginal wells, which are allowed to produce 20 bbls. per day, with the others allowed to produce a little more than this.

This week there were 38 tests completed in the field all proving producers except one, which was abandoned. Nearly half of the producing wells, 17 in all, were completed on artificial lift, two as swabbers, one on gas lift and the others pumpers. This is the highest percentage of artificial producers listed in any one week's completion report since the opening of the field.

EAST TEXAS COMPLETIONS

Completions in the East Texas field, with their top of sand and total depth records, and initial production, were as follows:

Gregg County

Arkansas Fuel Oil Co. No. 16-A Lathrop, 3,590-3,626 feet, 19 bbls. in 15 minutes. Atlantic and Sun Oil Co. No. 75 Hays, 3,490-3,520 feet, 98 bbls. per hour. Cox & Hamon No. 9 Lacy, 3,506-75 feet, 85 bbls. per hour. Gregg Oil Co. No. 3-A A.T.&P. RR., 3,516-34 feet, 15 bbls. in 15 minutes. Gulf Oil Corp. No. 10 Neely, 3,500-12 feet, 62 bbls. per hour. Humble Oil & Refining Co. No. 18 Bowles, 3,601-37 feet, 66 bbls. per hour. Humphrey No. 4 Baker, 3,647-79 feet, dry and abandoned; No. 4 Dunbar, 3,586-3,605 feet, 33 bbls. in 6 hours, on pump.

L.G.&S. Oil Co. No. 12 McQueen, 3,562-74 feet, 15 bbls. in one-half hour. T. W. Lee No. 1 fee, 3,650-53 feet, 40 bbls. per day on pump. United E.&W. Oil Co. No. 11 Walker, 3,602-04 feet, 37 bbls. in half hour. Arcadia Refining Co. No. 11 Samples, 3,733-34 feet, 37 bbls. in half hour. Carter & Baggett No. 1 Culver, 3,545-57 feet, 20 bbls. in 2 hours on pump.

Magnolia Petroleum Co. No. 10 Utzman, 3,480-3,500 feet, 10 bbls. in 4 hours on pump. Rubin No. 1 Pitner, 3,428-43 feet, 20 bbls. per day on pump. Texas Co. No. 31 Elder, 3,648-54 feet, 80 bbls. per hour. Texas-Canadian Oil Co. No. 3 Thomas, 3,683-84 feet, 125 bbls. per day on pump; No. 4 Thomas, 3,675-76 feet, 150 bbls. per day on pump.

Cherokee County

Merry Bros. and Perini No. 8 Kelley, 3,670-77 feet, 100 bbls. per day on pump.

Rusk County

W. T. Mack No. 1 Wilson, 3,603-77 feet, 20 bbls. in 10 hours on pump. DeArman and others No. 5 Crook Heirs, 3,567-3,652 feet, 126 bbls. in 8 hours on swab. Farrell Drilling Co. No. 8 Hammett, 3,682-90 feet, 20 bbls. in 12 hours on pump. Haynes Drilling Co. No. 16 Lee, 3,607-16 feet, 60 bbls. per hour through five-eighths inch choke. Humble Oil & Refining Co. No. 57-A Kangerga, 3,636-73 feet, 50 bbls. per hour through 1 1/16-inch choke; No. 10 Wooster, 3,727-3,801 feet, 55 bbls. per hour through 1 1/16-inch choke.

Jackson and others No. 11 Wilson, 3,617-40 feet, 60 bbls. in 30 minutes. Ohio Oil Co. No. 9 Graham, 3,676-89 feet, 20 bbls. per day on pump. Stanolind Oil & Gas Co. No. 6 Wooley, 3,513-61 feet, 20 bbls. in 4 hours on swab. Texas-Canadian Oil Co. No. 8 Kirsh, 3,647-48 feet, 250 bbls. per day on pump. Humble Oil & Refining Co. No. 40-A Laird, 3,645-96 feet, 52 bbls. per hour. L. O. McMillan No. 16

(Continued on Page 90)

Rocky Mountain Area

BUYERS TAKE 100 PER CENT OF CUT BANK'S PRODUCTION

By
T. R. INGRAM

DENVER, Colo., Oct. 5.—A Pennsylvanian test was spotted this week in southern Colorado in the old Garcia district in Las Animas County. There were no completions in the state.

The Continental Oil Co. No. 7 Rohlff, a flank well in the Lance Creek field, Wyoming, flowed 1,033 bbls. first 24 hours. Several wells in that pool are near completions. Bay-Elwell will make a test on Harney Creek, southwest of Lance Creek. This was one of five scattered new operations in Wyoming.

Wells in the Cut Bank field in Montana are now running 100 per cent of production as a result of improved conditions. There were no completions and only one new operation. H. R. Patterson's No. 1 Chatterton, several miles west of the pool, is showing for a small well. R. C. Tarrant has spotted another test for the Bynum district in Teton County. Kevin-Sunburst had one small completion and two first reports.

NEW MEXICO

Six producing wells were completed in the Monument field, southeastern New Mexico, the largest being Empire Oil & Refining Co. No. 1 Laughlin, C NW SE section 5-20-37. It had a natural flow of 7,488 bbls. of oil in 24 hours through casing, accompanied by 5,000,000 feet of gas. Oil pay was found at 3,830-61 feet, total depth. First show of gas was at 2,623-33 feet.

Shell Petroleum Corp. completed one of the biggest producing wells of the week at No. 1 Cooper "B," NE NE NW section 4-20-37. It flowed 3,096 bbls. of oil naturally and through tubing in 24 hours. The pay was found at 3,738 to 3,898 feet, total depth. Gas gauged 2,175,000 feet.

Other Monument completions: Amerada Petroleum Corp. No. 1 Haney, C SW SW section 33-19-37; oil pay, 3,842-3,910 feet, total depth; acidized; flowed 1,728 bbls. through 1-inch tubing choke in 24 hours. Continental Oil Co. No. 2-A-17 State, C SE SW section 17-19-37; acidized; flowed 576 bbls. through three-fourths inch tubing choke in 24 hours. Gulf Oil Corp. No. 1 Culp "B," NW NW SE section 31-19-37; pay 3,785-3,895 feet, total depth; acidized; flowed 912 bbls. of oil through tubing in 24 hours; gas 1,200,000 feet. Ohio Oil Co. No. 1 State-McGrail, C SE SW section 26-19-36; pay 3,920-70 feet; total depth 3,990 feet; acidized; flowed 2,184 bbls. in 24 hours, with 2,000,000 feet of gas.

In the Eunice sector, Landreth Production Co. No. 2 State "D," C NE NW section 22-21-36, flowed 3,168 bbls. of oil through tubing after acid treatment and was completed. It had pay at 3,795-3,908 feet, total depth. Gas gauged 2,000,000 feet. Gulf Oil Corp. No. 2 Graham-State "E," C NW SE section 6-21-36, had pay at 3,775-3,885 feet, total depth; was acidized and flowed 240 bbls. of oil through tubing in 24 hours. Humble Oil & Refining Co. No. 5 Knox, C SE SE section 10-21-36, flowed 816 bbls. of oil in 24 hours after acidizing, from pay at 3,765-3,885 feet, total depth, completed.

One new well was completed in the Jackson pool, Eddy County. Carper and others No. 1 Gissler "B," NW NE NW section 23-17-30, had a natural flow of 378 bbls. of oil through casing in 24 hours. Production was from pay at 3,403-35 feet, total depth.

The October allowable production for New Mexico was set at 81,200 bbls. by the Oil Conservation Commission, an increase of 2,845 bbls. daily over the September allowable. Of the October allowable, 76,555 bbls. were allocated to Lea County and the remainder to other sectors of the state.

Monument Area

Anderson-Prichard Oil Corp. No. 2 Britt "A," C NE SW sec. 6-20-37. Drlg. 3,530 ft.
Gulf Oil Corp. No. 1 Ketter, C SW SE sec. 20-19-37. T.D. 4,007 ft.; acidized; no gauge after acid; shot would not go off; fsg.
Texas Co. No. 3 State-Aggies, NE cor. sec. 20-20-37. T.D. 3,498 ft.; drlg. at 3,506 ft.
Amerada Pet. Corp. No. 2-L State, sec. 10-19-37. Drlg. 3,705 ft.
Amerada Pet. Corp. No. 2-R State, sec. 29-19-37. T.D. 3,810 ft.; set 6⅝-in. csg.
Tide Water Oil Co. No. 1 Anderson, C NW SE sec. 8-20-37. Testing at 3,877 ft.
Tide Water Oil Co. No. 1 Laughlin, C SE NW sec. 4-20-37 T.D. 3,880 ft.; flowed 17 bbls. per hour; testing.
Texas Co. No. 4 Phillips, C SE NW sec. 6-20-37. T.D. 3,910 ft.; swabbed 78 bbls. oil in 10 hours; setting packer.
Skelly Oil Co. No. 2 State "E," C NE NE sec. 29-19-37. Drlg. 3,970 ft.
Gulf Oil Corp. No. 1 Culp "B," NW NW SE sec. 31-19-37. T.D. 3,895 ft.; testing.
Gulf Oil Corp. No. 2 Culp "B," C NE SE sec. 31-19-37. Drlg. 3,336 ft.
Ohio Oil Co. No. 3 Barber, C SE SW sec. 32-19-37. Drlg. 3,890 ft.
Gulf Oil Corp. No. 7 Graham-State "C," C SW NE sec. 25-19-36. T.D. 3,975 ft.; C.O.
Shell Pet. Corp. No. 1 State "H," C NE SE sec. 20-19-37. T.D. 3,834 ft.; set 7-in. csg.
Humble Oil & Ref. Co. No. 2 Laughlin, C NW SE sec. 4-20-37. Moving in material.
Amerada Pet. Corp. No. 3 Lambert, C NE NE sec. 6-20-37. T.D. 3,105 ft.; cementing leak.
Tide Water Oil Co. No. 1 State "I," SW SE SW sec. 16-20-37. T.D. 2,850 ft.; fishing.
Continental Oil Co. No. 4-A-3 Reed, C SE SE sec. 3-20-36. Drlg. 3,285 ft.
Gulf Oil Corp. No. 8 Graham-State, C NW SE sec. 25-19-36. Derrick.
Amerada Pet. Corp. No. 3 Andrews, C SE NE sec. 11-20-36. Drlg. 1,750 ft.
Amerada Pet. Corp. No. 4 Andrews, sec. 12-20-36. R.U.R.
Amerada Pet. Corp. No. 1 Theo. Anderson, sec. 8-20-37. Rig.
Empire Oil & Ref. Co. No. 1-F State, sec. 30-20-37. Rig.
Gulf Prod. Co. No. 1 Whitmire, sec. 8-20-37. Rig.
Gulf Oil Corp. No. 2 Kutter-State "B," C SW NW sec. 38-19-37. Rig.
Gulf Oil Corp. No. 2 Williams, C SW SE sec. 29-19-37. Loc.
Gulf Oil Corp. No. 3-B Culp, C SE SE sec. 31-19-37. Loc.
Atlantic Pet. Corp. No. 1 Crutchfield, C NE SE sec. 32-19-37. Loc.
Empire Oil & Ref. Co. No. 2 Laughlin, C SW SE sec. 5-20-37. Loc.
Ohio Oil Co. No. 4 Barber, C NE SW sec. 5-20-37. Cellar and pits.
Ohio Oil Co. No. 5 Barber, C NW NW sec. 5-20-37. Cellar.
Tide Water Oil Co. No. 2 Anderson, C NE SE sec. 8-20-37. Cellar and pits.
Gulf Oil Corp. No. 1 Kutter "B," C SW SW sec. 21-19-37. Drlg. 1,795 ft.
Gulf Oil Corp. No. 1 Love, C SW SE sec. 32-19-37. Drlg. 3,063 ft.
Skelly Oil Co. No. 2 State "F," C SW SE sec. 17-20-37. Cellar and pits.

Eunice Area

Gulf Oil Corp. No. 1 Orcutt "C," C SE SE sec. 6-21-36. T.D. 3,760 ft.; drlg. plug.
Gulf Oil Corp. No. 3 Collins, C SW NE sec. 14-21-36. Drlg. 3,860 ft.
Mid-Continent Pet. Corp. No. 2 Marshall, C NW NW sec. 11-21-36. T.D. 3,845 ft.; shut down.
Sun Oil Co. No. 2 Adkins, C SE SW sec. 3-21-36. T.D. 3,872 ft.; flowed 306 bbls. in 3 hours; testing.
Gulf Oil Corp. No. 11 Arnott-Ramsey "C," C NE SE sec. 21-21-36. Drlg. 3,796 ft.
Gulf Oil Corp. No. 1 Sunshine, C SW SW sec. 30-20-37. T.D. 2,555 ft.; set 7⅝-in. csg.
Skelly Oil Co. and Sun Oil Co. No. 1 Adkins, C SW SW sec. 3-21-36. Drlg. 3,100 ft.
Continental Oil Co. No. 2-D-11 State, C SW SW sec. 11-21-36. Drlg. 2,595 ft.
Continental Oil Co. No. 3-D-11 State, C SE SW sec. 11-21-36. Drlg. 3,426 ft.
Jim Murray et al No. 3 Wallace, C SE NW sec. 3-21-36. Drlg. 3,104 ft.
Gulf Oil Corp. No. 2 Orcutt "C," C NE NE sec. 6-21-36 Derrick.
Humble Oil & Ref. Co. No. 6 Knox, C NE SE sec. 10-21-36. Rig.
Gulf Oil Corp. No. 2 Harry Leonard, C NE SW sec. 22-21-36. Drlg. 2,623 ft.
Shell Pet. Corp. No. 1 State "K," C NE NE sec. 36-20-36. T.D. 1,080 ft.; set 9-in. csg.
Humble Oil & Ref. Co. No. 5 State-Aggies, C NE SW sec. 31-20-37. Drlg. 2,646 ft.
Continental Oil Co. No. 4-B-14 Lockhart, sec. 14-21-36. Rig.
Continental Oil Co. No. 3-B-18 Meyer, sec. 18-21-36. Rig.
Gulf Prod. Co. No. 1-D Bell-State, sec. 6-21-36. T.D. 260 ft.; set 10-in. csg.
Gulf Prod. Co. No. 1-E Bell-State, sec. 11-21-36. Rig.
Gulf Prod. Co. No. 3 Harry Leonard, sec. 22-21-36. R.U.R.
Sun Oil Co. No. 3 Akens, sec. 3-21-36. Drlg. 318 ft.
Repollo Oil Co. No. 1 Berryman, sec. 11-21-36. T.D. 3,882 ft.; acidized; swbd. 63 bbls. in 9 hrs.; testing.
Texas Co. No. 4 State Aggies, C NW SE sec. 31-20-37. Moving in rig.
Sun Oil Co. No. 4 Akens, C NE SW sec. 3-21-36. Rigging up rotary.
Gulf Oil Corp. No. 6 Orcutt, C SW NE sec. 6-21-36. Cellar and pits.
Atlantic Oil Prod. Co. No. 3 State "L," C SW NW sec. 6-21-36. Loc.
Continental No. 15-B-4 Meyer, C NE NW sec. 4-21-36. Drlg. 3,418 ft.
Texas Pacific Coal & Oil Co. No. 2 State "A," Acct. 2, C NW SW sec. 5-22-36. T.D. 1,590 ft.; to set csg.

Sims Area

Penrose & Rowan No. 3 Cary, C SE NW sec. 22-22-37. T.D. 1,305 ft.; waiting on tools.
Continental Oil Co. No. 1-A-15 Elliott, SE SE SE sec. 15-22-37. Drlg. 2,825 ft.
Continental Oil Co. No. 1-A-21 Elliott, C SE SE sec. 21-22-37. T.D. 3,559 ft.; flowing 125 bbls per day while cleaning out.
Samedan Oil Co. No. 1 Hughes, C NE SW sec. 4-23-37. T.D. 3,611 ft.; C.O.
Ohio Oil Co. No. 1 Walden, C NE NE sec. 21-22-37. T.D. 3,636 ft.; C.O.
Skelly Oil Co. No. 1 Ella Simms "A," C SW SE sec. 3-22-37. T.D. 3,662 ft.; testing.
W. H. Street et al No 1 Wood, C W½ SE NE sec. 22-22-37. Drlg. 1,150 ft.
Amon G. Carter No. 1 E. M. Elliott, sec. 22-22-37. Loc.
J. E. Farrell No. 1 E. W. Walden, sec. 15-22-37. Derrick.
Repollo Oil Co. No. 2 Ollie Boyd, sec. 23-22-37. Cellar and pits.
Skelly Oil Co. No. 1 G. W. Sims, sec. 10-23-37. T.D. 275 ft.; set 12½-in. csg.
Skelly Oil Co. No. 1 W. P. Sims, sec. 10-23-37. Drlg 342 ft.

Hobbs Area

National Securities Oil Corp. No. 1 Linam, NE SE SW sec. 33-18-37; wildcat. Old well P.B. from 4,238 to 4,228 ft.; swbd. sulfur wtr.; no oil; S.D. for orders.

Cooper Area

Southern Oil Corp. No. 1 Gates, C SW NW sec. 23-24-36. T.D. 3,497 ft.; fsg.
Skelly Oil Co. No. 6 Coates, C NE SW sec. 3-24-36. T.D. 3,582 ft.; testing.

Lea County—Miscellaneous

Landreth Prod. Co. No. 1 J. W. Grizzell, C SE SW sec. 5-22-37. T.D. 3,780 ft.; flowed 20 bbls. per day of oil, 160 bbls. water.
Rowan et al No. 1 Mattern, C SW SE sec. 8-22-37. T.D. 3,789 ft.; preparing to kill gas.
C. & G. Oil Co. No. 1 E. Weir, C NE NE sec. 14-20-37. T.D. 4,075 ft.; testing after second acid.
Gulf Oil Corp. No. 1 L. M. Buffington, C SW SW sec. 13-25-37. T.D. 3,903 ft.; killed gas; to shoot.
Skelly Oil Co. No. 1 Stuart, C NE NW sec. 15-25-37. T.D. 3,416 ft.; P.B. 2,230 ft.; drlg. by whipstock.
Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17-32. T.D. 2,526 ft.; S.D.
Argo Royalty Co. No. 1 Lanehart, SW SE NE sec. 21-26-37. Drlg. 3,075 ft.
Magnolia Pet. Co. No. 1 Scharbauer-Edison, C NW NE sec. 29-16-35. T.D. 5,010 ft.; S.D.
Magnolia Pet. Co. No. 2 O. E. Carson, C NW NW sec. 33-21-37. Drlg. 3,597 ft.
Plains Prod. Co. and Culberson & Irwin No. 2 Knight, C NE SW sec. 14-24-37. Cellar and pits.
Republic Prod. Co. No. 2 Crosby, NW NW SW sec. 28-25-37. T.D. 3,310 ft.; 10,000,000 ft. gas; testing.
Stanolind O. & G. No. 1 Langley, sec. 15-25-37. Drlg. 3,030 ft.
Emperor Oil Co. No. 1 State, C SW SW sec. 5-21-36. T.D. 1,630 ft.; R.U.S.T.
Leonard No. 3 Lanehart, C NE NW sec. 21-25-37. Cellar and pits.
Talbot-Mullineaux No. 1 Quincy-Ricker, C SE SE sec. 7-16-36. Wildcat; S.D. 200 ft.
J. C. Clower No. 1 Turner, C SE SE sec. 29-21-37. Drlg. 1,370 ft.
Culberson-Irwin & Stovall No. 2 Stuart, NW SE SE sec. 10-25-37. Drlg. 1,315 ft.
Continental Oil Co. No. 1-A-30 Eaves, C NE NE sec. 30-26-37. Drlg. 2,235 ft.
J. E. Farrell No. 1-A Walden, C SW NW sec. 15-22-37. Cellar and pits.
Samedan Oil Co., No. 2 Hughes, C NW SE sec. 4-23-37. Cellar and pits.
Continental Oil Co. No. 1-A-24 Sholes, C SE SE sec. 24-25-36. Rig.
Brown & Reynolds No. 1 Parcell, C NW SE sec. 8-21-38. Wildcat. Drlg. 470 ft.
Baldridge and others No. 1 Blakey, C NW NE sec. 5-20-38. Wildcat. T.D. 1,645 ft.; S.D.
Rushwold Oil Co. No. 1 Carter, C NW NE sec. 30-20-39. Wildcat. T.D. 40 ft.

Eddy County

Etz Bros. No. 3 State, sec. 16-17-30. T.D. 2,600 ft.; set 6⅝-in. csg.
Hammond et al No. 1 State, SW SE SW sec. 15-17-28. Drlg. 1,130 ft.
Pecos Valley Gas Co. No. 1 Andrews-State, C SW SW sec. 2-17-28. T.D. 1,673 ft.; to shoot.
Repollo Oil Co. No. 1 McIntyre "C," sec. 21-17-30. T.D.

Fig. 057—Non-rising stem valve with screwed ends

Fig. 058—Non-rising stem valve with flanged ends

Fig. 0601—Rising stem-and-yoke valve with screwed ends

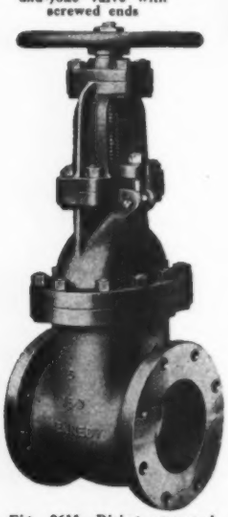
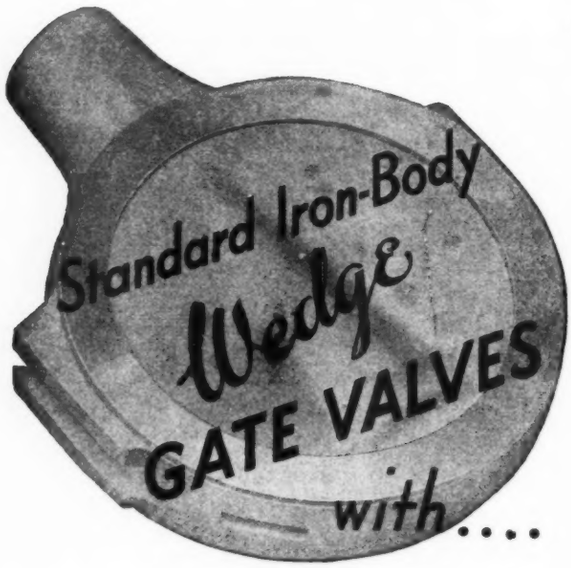


Fig. 0611—Rising stem-and-yoke valve with flanged ends

New!



literally a host of special features that make these valves easy to operate, resistant to destructive influences, thoroughly dependable, and economical to maintain. Every part from handwheel to pipe ends is designed to meet the most exacting requirements, and many of the refinements of these new valves are unobtainable in any other design.

If you want to know

how the stems are protected from scoring

why the stuffing box bolts cannot get in the way or their nuts and washers become lost while repacking

how stems are prevented from side motion when starting to open the valves

how annoyance of broken studs and difficulties of handling bolts and nuts are eliminated

how time is saved in connecting up to pipe lines

what is the unique packing arrangement that retains its tightness with either steam or water

. . . . . and the remainder of the 33 special features that make these valves the best value on the market—

Send the coupon for complete information.

KENNEDY

Standard Iron-Body *Wedge* Gate Valves

THE KENNEDY VALVE MFG. CO., Elmira, N. Y.

Please send descriptive folder on your new Standard Iron-Body Wedge Gate Valves.

NAME .....

POSITION .....

COMPANY .....

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O.G.J.

3,218 ft.; acidized; flowed 70 bbls. of oil per day through tubing.
Republic Prod. Co. No. 6 Russell, SW NE NW sec. 18-17-31. Drlg. 3,100 ft.
Flynn, Welch & Yates No. 74 State, C S½ NE SW sec. 27-18-28. Drlg. 2,726 ft.
D. & B. Oil Co. No. 2 Berry, NW SE NW sec. 21-17-30. Drlg. 3,142 ft.
William Dooley No. 1 Hatchett, NE SW NE sec. 11-20-26. Wildcat; T.D. 640 ft.; S.D., high water.

Harding County

Kahay No. 1 Dae Daca, C sec. 19-20n-31e. T.D. 1,702 ft.; S.D.
Clyde B. Neill No. 1 Foster, C NW SW sec. 27-21-30. S.D. 700 ft.

De Baca County

Mid-Continent Engineering Corp. No. 1 State, C NW SE sec. 27-4n-22e. T.D. 1,051 ft. in broken lime; S.D.

McKinley County

Claude Walker No. 2 fee, sec. 20-20n-9w. Drlg. at 100 ft.

Roosevelt County

Wirt Franklin and Flynn, Welch & Yates No. 1 Catts, C NW NW sec. 28-3n-30e. T.D. 1,080 ft.; to straighten hole.

Union County

Superior Oil Corp. and Olson Drlg. Co. No. 1 J. H. Zurich, SE SW sec. 2-21-34e. Drlg. 2,545 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norine Realty Co., Inc., No. 2 Gallegas grant, SE NW NW sec. 19-11n-4e. Drlg. gr. sh. 2,300 ft.

Guadalupe County

Anton Chico Dev. Co. No. 2 fee, NW NE SW sec. 26-9n-17e. S.D. 804 ft.; (cor.).

McKinley County

Al Gibbins No. 2 fee, NW SW NE sec. 28-20n-9w. Drlg. sh. 425 ft.
Foster & Clark No. 2 fee, NW NE NE sec 29-20n-9w. Drlg. 400 ft.
S. Boulton, CEL NW NE sec. 4-14n-10w. S.D. 1,490 ft.
Wm. Forth No. 5 fee, NW NW NE sec. 29-20n-9w. Loc.; (first report).

San Juan County

Continental Oil Co. No. 57 Tribal, NW NE NE section 2-29n-19w, Rattlesnake field, was completed at 733 feet in sand at 711-725 feet and made 31 bbls. in 17 hours through a three-eighths inch choke.

Atchison & Galloway No. 1 Cassidy, C SE SE sec. 19-29n-11w. S.D. 778 feet.; S.O.&W. at 683-95 ft.
R. R. Burke No. 3 Govt., NW NW NE sec. 18-21n-13w. R.U. machine.
Angel Peak Oil Co. No. 7 Govt., Lot 2, sec. 11-28n-11w. Drlg. 160 ft.
Jack Amenda No. 4 Hart, NW NE SW sec. 25-30n-12w. Drlg. 1,298 ft.

San Miguel County

Cabra Springs O. & G. Co. No. 1 Cabra Springs ranch, SW NE NE sec. 22-12n-22e. Drlg. 4,110 ft. in anhyd.
S. W. Pressey et al No. 1 Faulkner, NE NE NE sec. 25-17n-16e. Resuming at 5,082 ft.; (formerly Star-Kennedy No. 3 Adams).

Torrance County

48 Pet. Co. No. 1 Greenfield, C NW SW sec. 17-9n-8e. Resumed at 2,045 ft.

COLORADO

Adams County

Oklahoma Oil Co. No. 1 Baxter, C SW sec. 2-3s-66. S.D. 4,368 ft. for 4-in. D.P.
Glenridge Oil Corp. No. 1 Hills, SE SE SE sec. 27-3s-64w. S.D. 4,262 ft. for 6¼-in.

Archuleta County

William E. Hughes Est. No. 11 Gramps, NE of No. 10. Drlg. unreported depth.
Carl D. Linstrom No. 1 Crowley, SE SE SE sec. 3-22n-2e. R.U.
Maryott Drlg. Co. No. 1 Hollywood, SE SE SE sec. 15-34n-1w. S.D. 625 ft.
Oil City Pet. Co. No. 1-A Garrett, NW NE NW sec. 25-33n-2e. S.D. after P.B. from 1,515 ft. to O.S. at 970 ft.
Oil City Pet. Co. and Archuleta O. & G. Co. No. 1 Reeder, Lot 5 (SW SE SW) sec. 24-33n-2e. S.D. 1,183 ft.
H. L. Kendrick No. 1 Crowley (unsurveyed), sec. 2-32-1. Drlg. 1,167 ft.; will U.R. 6¼-in. for W.S.C.

Boulder County

Boulder Prod. Dev. Co. No. 2 Maxwell, NW NW NE sec. 24-1n-71. Drlg. 2,070 ft. sh.
Baker et al No. 1 fee, SW NE NE sec. 9-1n-70. Drlg. 1,650 ft.; S.G. and O.

Huerfano County

S. W. Pressey No. 1 Ojo, SW NE sec. 10-29s-69. O.W.D.D.; drlg. 3,150 ft.; S.G.; object Dakota at 3,900 ft.

Jackson County

Colorado Oil Ref. Co. No. 1 North Park Coal Co., NW NW sec. 18-9n-78w. Landed 8¼-in. at 2,700 ft.

LaPlata County

Detroit Oil Association No. 1, NW SW sec. 9-35n-12w. Drlg. below 3,125 ft.
McGarr Pet. Co. No. 1 Pinon Mesa Land Co., CSL NE NE sec. 34-33n-12w. Cmtd. 6¼-in. at 3,450 ft.; D.D. to 3,680 ft.; S.D.

Larimer County

Continental Oil Co. No. 8 Buckeye-U. P., C NE SW sec. 1-10s-68. Cg. 4,518 ft. in Lakota; top Lakota 3,512 ft.; dry to present T.D.

Las Animas County

The Garcia Corp. is moving in materials for a 3,600-foot test in the Garcia district in its No. 1 McClung, NE NW SE section 19-33n-61. The location is about 4 miles southeast of a group of gas wells operated by the Mountain States Oil Corp., in which production is found at around 1,100 feet, the gas being treated in a nearby absorption plant.

Three-fourths of a mile northeast of the new location, NW NW NW section 20-33-61, the Pacific Coast Gasoline Corp. drilled to 813 feet in 1927. This well had a strong show of gas with water at 422 feet and was abandoned in the Dakota, which had water, at 813 feet. A dry hole was drilled to 1,100 feet a mile and a half to the south and west. The Pennsylvanian has never been tested in this area. The Garcia district has been making some gas in wells drilled for water more than 40 years ago.

Lincoln County

Consolidated Smelting & Metals Co. No. 1 Hancock, NE NE SW sec. 7-17s-62. S.D. 2,096 ft.

Moffat County

Continental Oil Co. No. 1 Henderson, SW SW SW sec. 16-3s-91. T.D. 2,605 ft.; ran tubing and circulated with oil, but not enough pressure to flow the well; will swb. and D.D.

Mountain Fuel Supply Co. No. 1 Allen, NE SW SE sec. 32-12n-97w. Cg. 4,085 ft.

Mountain Fuel Supply Co. No. 1 Kuykendall, NE NE SE sec. 22-12n-100. Drlg. 2,606 ft.

Morapas Pet. Co. No. 1 Cole, C SW SE sec. 1-3n-92. Rig up; bldg. winter camp.

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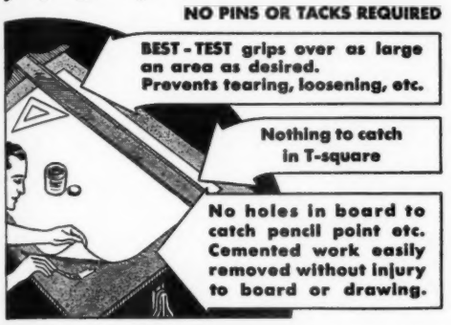
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Morgan County

Swisher et al No. 1 Lunt, 92 ft. W of E line and 360 ft. N of S line, sec. 3-4n-60. T.D. 1,718 ft.; bailing down to test W.S.O.

Montezuma County

McElmo Oil Co. No. 1 West, NE NW NE sec. 21-26n-17w. S.D. 3,960 ft.

Park County

Reference was made in this column two weeks ago to a unique fishing job in the South Park Oil Co. No. 1 Lemar, in the Hartsel district. Subsequent investigations revealed that it was due to a localized earthquake. Six joints of 12½-inch were in the hole, the pipe being moved up and down each day to keep it loose. When the morning crew went on duty it was found that the tools would not go to bottom. Part of the string had caved in and two joints had been moved 2 inches to one side. After swedging out the collapsed pipe, the remainder of the string was recovered. An examination showed two joints up from the bottom the threads and collar at the point where the movement took place had been bent as though held in an immense vise. Subsequent investigations showed surface cracks on the Hall ranch 11 miles away. The recording seismograph at Regis College in Denver, more than 100 miles away, showed an earth movement at about the time the accident occurred.

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75. Drlg. 1,200 ft.

South Park Oil Co. No. 1 LeBert, NE NE NW sec. 21-11n-75w. S.D. 705 ft.

South Park Oil Co. No. 1 State, SE NE SW sec. 16-11s-75w. Drlg. 5,045 ft.; 4¾-in. at 5,035 ft.

Routt County

Mid-Colo Pet. Co. No. 1 Omoholt, NE SE SE sec. 29-4n-87w. S.D. 2,910 ft.; renewing leases before drlg. into Sundance.

Washington County

I.T.I.O.-Carter-Foster Minerals Corp. No. 1 Vorce, C NE NE sec. 28-1s-49. Drlg. 5,800 ft.; getting near the granite.

Weld County

Continental Oil Co. No. 2 Briggs, C NE SW sec. 13-6n-61. T.D. 6,242 ft.; W.O. engine parts.

WYOMING

Albany County

California Co. No. 4 Holst, SE sec. 13-17n-77. Drlg. 1,878 ft.

Geo. D. Parkinson et al No. 1 George & Hunt, NW NE SE sec. 5-17-75w. Drlg. 4,850 ft.

Ohio Oil Co. No. 1 Stiles, SW cor. sec. 12-15n-75w. Water in Tensleep at 2,978-3,003 ft.; P.B. cmtd. 4¾-in. at 2,840 ft.; drlg. plg. to test O.S. in Satanka sd.

Hal Blakeman No. 1 Chapple, C NE NW sec. 31-21-76. T.D. 1,510 ft.; fshg.

Big Horn County

Stock Oil Co. No. 1 Allen, Lot 52, sec. 32-56n-97. T.D. 3,825 ft.; on fire again; laying steam lines.

Ohio Oil Co. No. 1 Wiley, C NE NW sec. 25-56n-97. M.I.M. (first report).

Ohio Oil Co. No. 2 Smith, CWL NE SE sec. 32-56-97. Drlg. 3,530 ft. in L.

Ohio Oil Co. No. 1 Irene Lindsay, C NW SE sec. 23-56n-97. T.D. 4,856 ft.; loct circ.; cmtd. with 75 sacks.

Ohio Oil Co. No. 2 State, NE cor. Lot 38, sec. 36-46n-97. R.U.

Peay Oil Co. No. 1 Denio Hr., 43-C, sec. 15-55n-87w. T.D. 3,845 ft.; prep. to run 6⅝-in.

Stock Oil Co. No. 1 Griffin, Lot 60, sec. 4-55n-97. Drlg. 1,916 ft. in sh. and bentonite.

Peter Evanoff et al No 1 McAllister, NW NE SE sec. 9-55n-87. T.D. 2,895 ft.; fsg. bit; 6¼-in. at 2,640 ft.

Carbon County

Medicine Bow Oil Co. No. 1 Hintze-Govt., C NE SE sec. 18-22n-78. Drlg. 1,560 ft.

General Pet. Corp. No. 1 Union Pacific, SW NW sec. 19-83w. T.D. 4,420 ft.; tools rec.; drlg. ahead.

Ohio Oil Co. No. 11 Harrison & Cooper, NE SW SW sec. 35-20n-78. Drlg. sh. and bentonite at 1,911 ft.

Ohio Oil Co. No. 2 Dixon, SE NE NE sec. 34-20n-78w. R.U. to deepen old well from 8,094 ft. to Sundance.

Sinclair-Wyoming Oil Co. No. 10 Govt., SW SE NW sec. 7-26-89w. Drlg. 4,461 ft. in red beds.

Converse County

Chadron-Osage Oil Co. No. 1 State, SW SW sec. 16-32n-69w. S.D. 3,050 ft.; may install rotary.

Wyoming Southern Oil Co. No. 1 Salisbury, NW NW SE sec. 27-32n-69. M.I.M. for shallow test (first report).

Campbell County

G. J. Shearin et al No. 1 Rhodes, NE SE SW sec. 24-49n-74. S.D. 191 ft.

Fremont County

C. E. Nelson No. 2 Enos, SW NE SW sec. 27-3n-1w. Drlg. 121 ft.

Tropic Oil Co. No. 1 Govt., C SE SW sec. 34-27n-90w. Drlg. 2,853 ft. in Frontier; carrying 4¾-in.

Sinclair-Wyoming Oil Co. No. 2-C Muskrat, NE SW SW sec. 1-33n-92w. Drlg. 6,670 ft.

Hot Springs County

Mountain States Power Co. No. 1 Mexico-Wyo., SW SW NW sec. 11-46n-99. O.W.D.D.; old T.D. 2,901 ft.; water decreased to 3 B.P.D.; gas pr. incr. to 100 lbs

Empire State Oil Co. No. 1 Larson, sec. 33-44n-93. Drlg. 1,521 ft.

Fruedenthal No. 6, SE SE NE sec. 21-43-92. T.D. 405 ft.; tstd. 4 B.P.D.; will D.D.

Laramie County

Amerada Pet. Corp. No. 1 Morton, C SW SW sec. 13-13n-68. Drlg. 4,527 ft. in sdy. sh.; set 24½-in. at 100 ft.; 16-in. at 659 ft.

Lincoln County

Place Oil Co. No. 36, SE sec. 9-26n-113. Spd. and set one joint 15⅛-in. and S.D.; W.O. approval of bond.

Senrab Oil Corp. No. 3 Govt., CSL SE NW sec. 10-26n-113w. S.D. 1,020 ft.

Niobrara County

The Continental Oil Co. had another completion in the Lance Creek field in its No. 7 Rohlff, C NW SW section 32-36-65, an outside well on the northwestern flank. It was drilled to 3,950 feet. It topped the Sundance section at 3,703 feet and had oil saturated sands at 3,725-35, 3,750-61, 3,853-92 and 3,924-42 feet. Top of red beds was at 3,944 feet. It made 1,088 bbls. first 24 hours through the casing. It is on approximately the same structural contour as the J. M. Huber Co. No. 1 Joss, SE NW section 6-35-65.

Bay-Elwell have made a location for a test on the Harney Creek structure to the southwest of Lance Creek in their No. 1 Joss, CSL SE NW section 1-34n-66. It will be drilled to 2,000 feet with cable tools. Manning & Martin, Inc., have the contract.

Argo Oil Co. No. 5 Elliott, C NW NW sec. 5-35n-65. R.U.R. Bay-Elwell No. 1 Joss, CSL SE NW sec. 1-34n-66w. M.I.M. (first report).

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Continental Oil Co. No. 1 Rohlff, 200 ft. N of S line and 660 ft. W of E line, SE NW sec. 32-26n-65. T.D. 3,967 ft.; 7-in. cmtd. 3,859 ft.; R.U. to swb.
Continental Oil Co. No. 2-B Schuricht, SE SW SE sec. 6-35n-65. R.U.R.
Continental Oil Co. No. 2-A Dielman, NW NE NE sec. 7-35n-65. Dk.; W.O.R. equip.
Adams Louisiana Co.-Bay-Elwell No. 1 Spaugh, C NW NE sec. 18-35n-65. Cmtd. 12½-in. at 230 ft.; R.U.R.
Holly Dev. Co. No. 1 Novick, NE SE SW sec. 6-35n-65. Drlg. 1,400 ft.
Lewis Gokel No. 1, NE SE NW sec. 31-35n-62w. Drlg. 900 ft.
J. M. Huber Corp. No. 2 Joss, NE NE SW sec. 6-35n-65. Bldg. rig.
Ohio Oil Co. No. 1 Elizabeth Lamb, C NE NE sec. 5-35n-65. T.D. 4,010 ft.; trying to cir.; Sundance sds. 3,775-3,804 ft. and 3,839-55 ft.
Ohio Oil Co. No. 3 Richards & Comstock, 200 ft. S of N and 660 ft. W of E, NE SW sec. 32-36n-65w. T.D. 3,867 ft.; prep. to run tubing; top r.b. 3,862 ft.; 7-in. 3,773 ft., 400 sacks.
Ohio Oil Co. No. 5 Converse Sheep, C SE SW sec. 32-36n-65w. S.D. below 4,600 ft.; believed to have cored top of Tensleep.
Riggs Oil Co. No. 2 Spaugh, C NW NE sec. 5-35n-65. T.D. 350 ft.; fsg.
Chester Oil Co. No. 1 fee, NE NE NE sec. 14-39n-61. Drlg. 926 ft.; 45 B.P.D. in Dakota at 778-808 ft.
S. & H. Dev. Co. No. 11-A Olinger, SW NE sec. 1-36n-63. T.D. 1,750 ft.; D.&A.

Park County

General Pet. Corp. No. 1 Govt., NW NW NW sec. 33-47-100. R.U.R.
Resolute Oil Co. No. 1 State, C NW SW sec. 16-57-101w. Drlg. 7,600 ft.

Platte County

Dividend Oil & Ref., Inc., No. 1, CSL NW SW sec. 17-24n-66. Rng. 12½-in. at 511 ft. (first report).

Sublet County

Progressive Oil Co. No. 1 Haddenham, SE NW NW sec. 21-28n-113w. Drlg. 400 ft.

Sheridan County

Beaver Creek Oil Co. No. 1 Allison, SW SE sec. 15-55-85. T.D. 3,185 ft.; U.R. 4½-in. to carry; H.F.W. at 3,090-3,100 ft.

Sweetwater County

Mountain Fuel Supply Co. No. 1 Cooper, C NW SE sec. 15-16n-104. Loc.; South Baxter Basin (first report).

Uinta County

Bridger Basin Oil Co. No. 1-B, NW NW SW sec. 10-14n-118. Drlg. 1,800 ft.
W. D. Marshall No. 1 Govt., NW SW SE sec. 12-15n-118. Drlg. 1,388 ft.

Washakie County

Wyoming O. & R. Co. No. 4 Govt., NW NW NW sec. 31-48-90. Drlg. 236 ft.
Nystrom & Smoot No. 3 State, NE NE NE sec. 36-48-91. Drlg. 186 ft.
Yale Oil Corp. No. 1 Govt., SE SE SE sec. 25-48-91. Drlg. 260 ft.
Arlton & Doyle No. 1 Govt., SW SW SE sec. 29-48-91. Drlg. 1,132 ft.
Bruce Teeters No. 3 Govt., CWL SW SW sec. 30-48-90. Drlg. 1,576 ft.
Wyoming O. & R. Co. No. 1 State, NE SE NE sec. 36-48-91. Drlg. 1,485 ft.; carrying 8¼-in. at 1,456 ft.
Woods-Callahan Oil Co., Ltd., No. 1 Keye, SE SE NW sec. 25-48n-91. Loc. (first report).

Weston County

The Wheendon Oil Co. No. 16, C SW SW section 16-46-63, Osage field, was completed at 421 feet in sand at 388-91 feet for enough gas to supply the Palis refinery on adjoining lease.

Charles Stough No. 4, CWL SW NW sec. 4-46n-63. Drlg. 300 ft. (first report).
H. D. Wiltse No. 10, NE NW NE sec. 17-46-63. R.O.G. (first report).
John Brophy No. 1 Lemke, SE SE NE sec. 10-48n-65w. Drlg. 500 ft.
Conway Oil Corp. No. 1 Govt., C SE NW sec. 7-41n-60w. Cmtd. cave at 2,700 ft.; W.O.C.

MONTANA

Big Horn County

Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. S.D., 3,540 ft.
E. A. Lammers & Son No. 1 Berhold, SE SE sec. 6-1s-32e. Drlg. 226 ft.

Cascade County

C. Leonard Smith No. 1 Smith-Schwingle, NE NE SW sec. 14-22n-2e. Cmtd. 8¼-in. at 210 ft.

Carbon County

East Bridger O. & G. Co. No. 1, CSL SE SE sec. 23-6s-23e. Resumed; drlg. 640 ft. in Coo. sh.
Ohio Oil Co. No. 1 Northern Pacific, SE NE SW sec. 11-7s-21. T.D. 5,554 ft.; cmtd. 4¾-in. at 5,440 ft.; W.O.C.; M.O. rot.; is probably stdg
Henderson Producing Co No. 1-H-11 Elk, 11, SE SE NW sec. 35-9s-23e. Drlg. 214 ft.; base Eagle 90 ft.
Round Butte O. & G. Co. No. 2, CWL NE SE sec. 3-8s-23e. Drlg. 310 ft.

Fallon County

Montana-Dakota Utilities Co No. 1 Unit, NE NE NW sec. 17-4n-62. T.D. 6,186 ft.; tstg.
Montana-Dakota Utilities Co. No. 2 Unit 8, C NE SW sec. 8-4n-62. R.U.; W.O. tools.

Fergus County

Minnesota Co. No. 1 Fenholt, SE NW SW sec. 24-21n-18e. S.D. 1,100 ft.; tools still in hole.
Judith Operating Co. No. 2 Govt., NW NE sec. 5-22n-17e. Drlg. 2,775 ft. in Colo.; wtr. in sd. at 2,580-2,610 ft.
Kalispel-Kevin Oil Co. No. 2 Emmons, C SW SE sec. 20-2s-18e. Drlg. 576 ft.
Emmons et al No. 3, SE NE NE sec. 6-21n-18e. Gas at 432-586 ft. in 15-in. hole; will bradenhead and D.D. in 12-in. hole.

Glacier County

An improvement in marketing conditions in the Cut Bank field marked the week's developments. The pipe line companies have increased their purchases and as a result practically all wells in the field are being pumped at capacity. These include the Montana Power Gas Co. wells which were shut down for more than a month when the Toronto Pipe Line Co. discontinued its connections. These wells are now running 100 per cent. Also, new wells in the Big Bend district in the southern part of the field which were shut in when completed are now being connected with the pipe lines and practically all of them are on production. The increase in runs is credited to a decline in the Turney Valley field in Canada, which threatened to take away a considerable part of the market for Cut Bank crude, and to refiners who had been running very little oil to storage building up their stocks in anticipation of cold weather conditions when runs are seriously hampered.

Northwest Refining Co. (L. B. O'Neil and associates) has let the contract for its 2,500-bbl. refinery at Cut Bank to the Ralph M. Parsons Co. It will be a skimming reforming unit at present with plans for a Dubbs cracking unit to be added later under a Universal Products Co. license. Machinery and equipment are beginning to arrive.

An important wildcat in the Cut Bank area was reported showing oil this week. This is H. R. Patterson No. 1 Chatterton, SE SE NE section 22-32n-6w, 3 miles to the southwest of the producers in section 1-32n-6w. Should it make a producer it will add close to 2,000 acres to the probably producing area on the southwest. It topped the Cut Bank sand at 3,283 feet and had a show of oil at that depth. It stopped to run the 7-inch at that depth before drilling in. Estimates place the capacity of the well as it stands at around 20 bbls. It is in the Blackfeet Indian reservation.

There were no completions and only one new location in Cut Bank.

A. B. Cobb No. 2 All-115, SE NE SE sec. 31-33n-5w. Bldg. road; (first report).
A. B. Cobb No. 2 Jackson-Reagan, NE NE NW sec. 6-32n-5w. T.D. 2,812 ft.; rng. 7-in.
Drumheller Reservation Synd. No. 1 Tarrant, C SW SW sec. 21-34n-6w. R.U.
Montana Power Gas Co No. 2 Gaines CSL SW NW sec. 6-33n-5w. Drlg. 2,100 ft.
Montana Power Gas Co. No. 1 Hattie Miller, C NW sec. 1-35n-5w. Drlg. 2,100 ft.
H. R. Patterson No. 1 Chatterton, SE SE NE sec. 22-32n-6w. T.D. 3,283 ft. in top Cut Bank sd.; S.O.; cmtd. 7-in. 3,283 ft.; W.O.C.
Nadeau Bros. No. 2 Ewald, C SE NW sec. 9-32n-5w. T.D. 50 ft.; strtng. hole.
Santa Rita O. & G. Co. No. 1 Shubat, C NW sec. 33-34n-5w. Cmtd. 7-in. at 2,625 ft. 60 sacks; W.O.C.
R. C. Tarrant No. 3 State, NE SE NE sec. 36-34n-6w. Drlg. 1,840 ft.
R. C. Tarrant No. 7 Getty, SW NW SW sec. 2-34n-6w. Spdg. 255 ft.
R. C. Tarrant No. 3 Reichoff, C NE NE sec. 36-32-6w Cmtd. 10¾-in at 715 ft.; Colo. 680 ft.
R. C. Tarrant No. 8 Haglund, Jr., CEL NE NW sec. 13-34n-6w. Drlg. 2,475 ft.

(Continued on Page 110)

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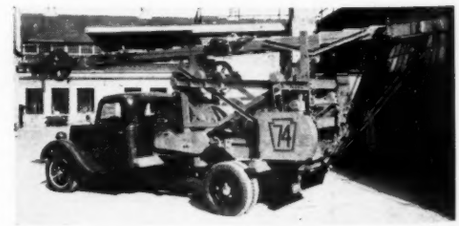

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Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, Oct. 3.—Crude oil and naphtha production in August from all Alberta wells was reported by the Alberta lands and mines department at 124,287 bbls. compared with 122,771 bbls. in July.

South Turner Valley

In the South Turner Valley extension, Union-Freehold Oil Corp. No. 1. LSD 8, section 21-18-2w5, bottoming in the lime at 6,462 feet, was damaged about $2,500 when a nitroglycerin shell exploded. The well has has been put back on production, making about 4,000,000 feet of wet gas per day, with naphtha recovery averaging 20 bbls.

British Dominion Oil & Development Corp. No. 4, LSD 6, section 28-18-2w5, bottoming at 6,423 feet, which has been making around 80 bbls. of naphtha per day from the lime, will be shot with 600 quarts.

W. A. Preston and associates No. 1 Rand, S half LSD 5, section 34-18-2w5, is cleaning out preparatory to deepening from 3,790 feet. Location is east of the Sterling-Pacific producers, and the unfinished test was partly drilled by Nolan-Hungerford Royalties.

West Side Operations

On the west side of the South Turner Valley, section 21-18-2w5, Sovereign Royalties No. 1 Meyers & Wright, LSD 14, is below 5,656 feet after passing through the lower Dalhousie sands where fair shows of light crude were met. It is expected to get the Madison limestone around 5,825 feet. Farther south, Newfold Royalties No. 1, LSD 11, same section, is resuming after cementing casing at 505 feet.

In the southwest corner of the section, Foundation Petroleums No. 1. LSD 5, passed through a softer formation below 5,668 feet with some gas pressure and showings of oil, and got the Dalhousie sand at 5,711 feet. It is deepening below 5,771 feet. Owing to heavy gas pressure two additional heavy duty pumps have been installed. Oil showings with the rotary mud indicate commercial production. West Side Royalties No. 1, LSD 3, is resuming from 2,477 feet after installing rotary equipment.

New West Side Tests

In the northwest portion of section 28-18-2w5, Central Royalties, Ltd., backed by W. Fay Becker and associates of Calgary, has resumed work on the unfinished Sunburst-Mid Royal No. 1 in LSD 14. Location is south of Century Royalties No. 1 in the same LSD and east of Turner Valley Royalties No. 1. It has been standing since 1934 at 3,805 feet. Roy Widney is supervising the drilling. The Becker group has arranged with Vancouver, British Columbia, interests for completion of Richfield Petroleums No. 2, LSD 5, same section, which has been standing for several years at 4,010 feet. The Becker interests are also organizing a company to develop acreage between Turner Valley Royalties No. 1 producer and the Richfield location. All these locations are on the west flank of the structure and are thought to be in the potential light crude area indicated by Turner Valley Royalties No. 1.

West of the Turner Valley Royalties' producer, Alberta & B. C. Oils, Ltd. backed largely by Vancouver interests, have taken over the lease on LSD 16, section 29-18-2w5, and will start a test this fall. Share Royalties, Ltd. organized by "Red" Dutton and associates of Calgary and Vancouver will drill in N half LSD 8, section 29-18-2w5.

Okalta Oils, Ltd., headed by W. S. Herron of Calgary, is negotiating for three different tests on acreage south of the West Side Royalties No. 1 and west and north of that location.

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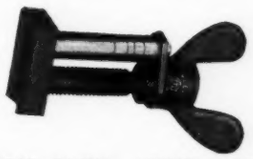

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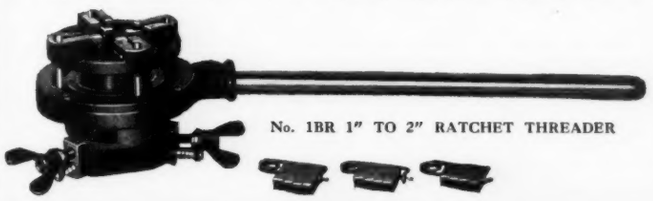

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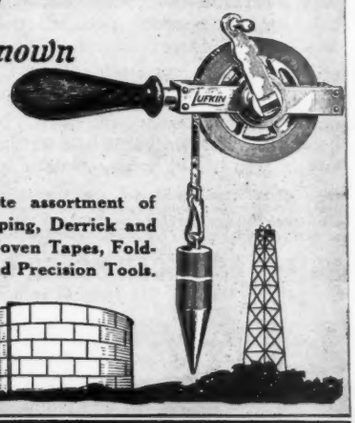

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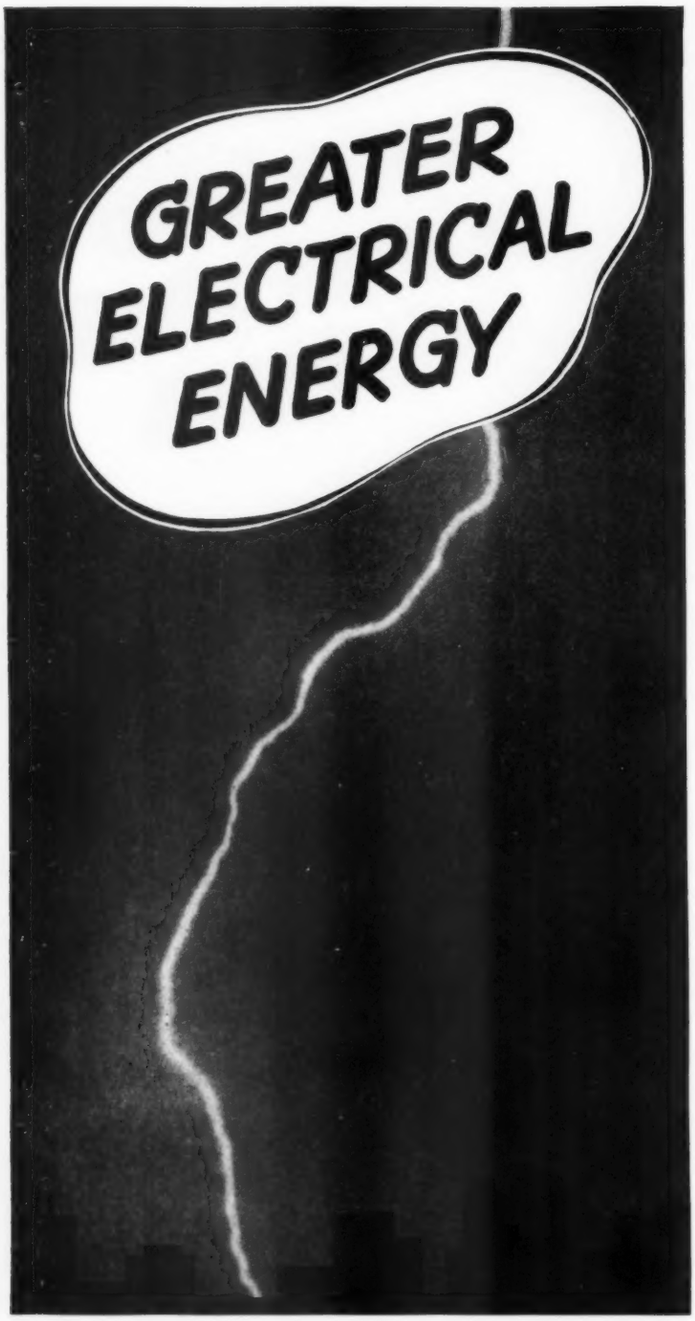

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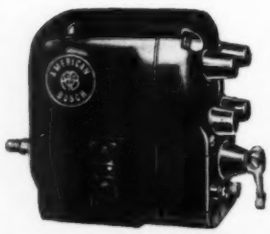

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The Okalta holdings are parallel to the older Turner Valley naphtha producers and in line with the new crude oil development on the west flank.

Geophysical Survey Started

The most extensive geophysical survey ever undertaken in Alberta has been started by Imperial Oil, Ltd. and Nordon Corp., Ltd. between Lethbridge and Twin River. Operations are now in progress in the Raymond district. Approximately 230,000 acres will be covered at a cost estimated at $60,000, the holdings including 170,000 acres by Nordon Corp. and 60,000 acres by Imperial Oil, Ltd. The survey is preliminary to deep drilling operations to be started in 1937.

Freehold to Sell Interest

Freehold Oil Corp., Ltd. of Calgary is submitting to its shareholders a proposal to sell its interest in the Mar Jon-Freehold No. 1 producer in LSD 9, section 28-18-2w5, to the Royalite Oil Co. in exchange for 1,850 shares of Royalite stock.

Central West

Operations in Central Ohio, Kentucky, Illinois, Indiana

By GEORGE A. WHITNEY

FINDLAY, Ohio, Oct. 5.—The main difficulty experienced in developing a market for Lima crude was overcome last week, when a 10-cent reduction of the market price for this crude was announced by Ohio Oil Co. In view of the competition offered by Michigan oil and the fact that Mid-Continent crude has been delivered to refineries in this area on a competitive basis for some time, there was little hope of finding a market without falling in line with the recent reduction of Michigan and Corning crude oil prices.

Ohio Oil Co. has announced that it will increase its use of this crude and will continue to act as purchaser as in the past, marketing the oil to various other refineries in this district, when the National Refining Co. discontinues running this crude through its Findlay refinery, November 1.

Fifty-one old oil wells were abandoned in the Lima field in the past week and there has been a decided increase in field operations in this section. In Hardin County, section 11, Marion Township, Elmer R. McCaubrey No. 1 Shadley Sisters had an initial production of 50 bbls. after a shot. In section 24, Jackson Township, Forest Gas Co. was drilling at 1,000 feet in No. 1 John Stevens. Petersine Realty Co. is fishing at 490 feet on the J. E. Buerger farm in section 19, Pleasant Township.

In Shelby County, section 3, McLean Township, Royal Oil Co. No. 1 Ben Barhorst is a 1-bbl. well at 1,260-1,300 feet. In section 23, Cynthian Township, Giltex Oil Co. No. 1 Ben Zucher started at 7 bbls. per day at 1,239-91 feet.

Davis & Jones No. 2 Charles Post, in section 9, Amanda Township, Allen County, is a quarter-barrel well.

In Seneca County, section 25, Liberty Township, B. and R. Fredericks have moved a rig on the H. D. Zimmerson property for No. 4. In section 35, same township, J. R. Summers is drilling on the J. F. Summers farm.

In Sandusky County, section 31, Rice Township, W. Montgomery & Co. is drilling No. 2 Noah Hetrick.

CENTRAL OHIO

Thirteen completions were reported in the Central Ohio field this past seven days and the seasonal decrease in activity is noticeable in this field.

Ohio Fuel Gas Co. No. 1 William Griffith, which swabbed 40 bbls. in three days, has been shot at 3,215-21 feet and is producing 130 bbls. in 24 hours. It is in section 17, Clayton Township, Perry County. In section 14, Reading Township, Perry Strum No. 2 Alice King had Clinton sand at 3,132-60 feet, total depth 3,177 feet, without a show of oil or gas and has been abandoned. In section 1, same township, Wehrle Brothers No. 1 L. M. Bowser was drilled to 2,817 feet and abandoned as dry.

In Scioto County, section 4, Harrison Township, William Ranshausen No. 1 Caroline Sampson was completed below the Weir sand at 297-339 feet, a small gas well.

In Hocking County, section 19,

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LAYNE PUMPS
LAYNE WELL WATER SYSTEMS

Ward Township, Kachelmacher No. 4 Nelsonville Coal & Land Co., which had a show of oil in the top Berea, is being drilled to the Clinton sand. In section 5, Laurel Township, Kelch Brothers are moving a rig on their new location on the Frank Edwards farm.

In section 23, Walnut Township, Fairfield County, Bishop & Co. No. 2 Plum is down 730 feet. In section 4, Pleasant Township, City Natural Gas Works is down 1,835 feet on the Samuel Wertz property.

Ohio Fuel Gas Co. No. 1 W. C. Reed, in section 11, Cheshire Township, Gallia County, drilled to the Niagara lime at 3,260-3,572 feet with a show of oil. The well was plugged back to 2,965 feet and was shot and after gauging at the rate of 342,000 feet of gas a day, blew down to 2,000 feet and was abandoned.

In Morgan County, section 12, Marion Township, Penn Contracting Co. No. 2 Ward White was completed below the Salt sand at 871-75 feet and gauged 277,000 feet of gas naturally. In Lot 2, same township, Ohio Fuel Gas Co. is moving a rig on the P. H. Phelps location.

Ohio Fuel Gas Co. No. 1 J. M. Dorr, in section 15, Hanover Township, Ashland County, was completed in Clinton sand at 2,852-55 feet, a commercial gas well. Ohio Fuel Gas Co. No. 1 E. C. Johnson was abandoned in Clinton sand at 2,626-31 feet and was dry. Same company is down 2,415 feet on the Raymond Young property in section 1, Vermilion Township.

In Lorain County, section 28, Avon Township, Ohio Fuel Gas Co. No. 1 John Schober was a small gas well at 2,373-86 feet and was abandoned. In section 28, same township, William Dempsey No. 1 Robert Barr is below 1,000 feet. In Lot 80, Columbia Township, Ohio Fuel Gas Co. is down 200 feet on the Fred Walkden lease.

Ohio Gas, Light & Coke Co. is spudding on the Nancy Holderbaum location in section 10, Mill Creek Township, Coshocton County. In section 8, Perry Township, Hulse-Kuntz, Inc. No. 1 J. W. Mosholder is down 2,650 feet. In section 3, Franklin Township, Ohio Fuel Gas Co. is down 1,800 feet on their own property.

In Holmes County, section 5, Washington Township, Ohio Fuel Gas Co. No. 1 Harvey Berry was completed below the Clinton sand at 2,785-95 feet and is a commercial gas well. In section 16, same township, Ohio Fuel Gas Co. No. 1 William Young was dry and abandoned in Clinton at 3,009-21 feet. In section 12, Mechanics Township, Bell Brothers are down 375 feet on the A. and H. Logsdon No. 2. In Ripley Township, section 32, Ohio Fuel Gas Co. No. 1 Julius Gasche was dry and abandoned in second Clinton at 3,372-80 feet. In section 33, Paint Township, Ohio Fuel Gas Co. No. 1 Maude Harrold, completed in Clinton at 4,132-70 feet, is a commercial gas well. The same company is moving tools on the Julia Mitten farm in section 18, Monroe Township, and is down 3,000 feet on the Burgess Bird property in section 20.

Ohio Fuel Gas Co. is moving a rig on the Samuel Speicher property in section 23, Paint Township, Wayne County, and are down 2,675 feet on the Sam Nussbaum lease in section 5. In section 11, Congress Township, Ankrom & Co. No. 1 Charles Myers, shut down for orders after making

(Continued on Page 99)

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Michigan Field Report

DECLINING OIL PRODUCTION SPURS MICHIGAN OPERATORS

By
PAUL A. ELLIOTT

MUSKEGON, Mich., Oct. 5.—Featured by the discovery of a new oil field in Buckeye Township, Gladwin County, Michigan operations, in search of new oil production, resulted in nearly a 50 per cent increase in initial output during September over August.

Gladwin County

C. L. Maguire, Inc., No. 1 Haven, SW SW SW section 25-18n-1w, second successful test in Buckeye Township, Gladwin County, was rated good for 150 to 200 bbls. daily in the Dundee formation after the first acid treatment. It was drilled about 100 feet into the Dundee limestone. Further acid treatment may be applied.

M. F. Whitehill struck bottom water in No. 1 Frank Spicer, NW SE NW section 2-17n-2w, Beaverton Township, and the hole was abandoned at 3,930 feet. Dundee was topped at 3,824 feet with a show of oil and gas at 3,884 feet.

Daily production of Goll, Graves & Mechling, Inc., No. 1 Crigano, SE NE NE section 36, Beaverton Township, an outpost, was increased to about 130 bbls. a day by acid treatment. The Crigano was drilled to 3,890 feet, or about 100 feet into the Dundee limestone.

M. F. Whitehill No. 1 Tom Bell, NW NE NW section 11, Beaverton Township, was nearing the Dundee drilling at 3,560 feet.

About 15 miles north of the new Buckeye Township field, Olympia Oil & Gas Co. was at 3,300 feet in No. 1 Barnes, NW NW NW section 22-20n-1w, a Butman Township wildcat, and was expected to drill into the Dundee this week.

Midland County

Most favorable development in Midland County last week where six new oil wells were completed for an aggregate open flow of 785 bbls. daily was the output of 200 bbls., naturally, from Brehm-Hollman Oil Corp. No. 1 Coleman Bank, NE SE NW section 19-15n-2w, in Geneva Township. Oil was encountered at 3,102 feet, 27 feet in the Traverse.

With two other producers in the Traverse and two in the Dundee, the Geneva Township field is attracting more attention for future drilling operations.

Five other producers were developed in the Dundee pay sands in Porter and Jasper Townships. Largest was McClanahan Oil Co. No. 4 Dinsmore, SE SW NW section 20-13n-1w, Porter Township, which made 250 bbls. a day after acid treatment at 3,435 feet, 31 feet in the limestone.

Pure Oil Co. brought in an initial natural production of 180 bbls. in the No. 4 Clark heirs well, CNL SW NE section 2-13n-2w, Jasper Township, at a total depth of 3,431 feet. Pure No. 9 Bond-Root, C N NE SW section 3, same township, made 85 bbls. daily after an acid treatment at 3,455 feet. It was plugged back from total depth of 3,466 feet.

C. L. Maguire, Inc., added 70 bbls. daily after acidizing No. 4 Hoyt, SW SE SW section 18, Porter Township, at a total depth of 3,431 feet, while Pure No. 10-C Laura E. Root, SW SW NW section 20, same township, was estimated good for 30 bbls. a day in the Dundee at 3,449 feet.

Byron A. Bartlett No. 1 E. Siebert, NW SW SE section 33-15n-2e, Larkin Township wildcat test, which struck bottom water at 3,888 feet without a show in Berea, Traverse or Dundee.

Montcalm County

About 50 bbls. daily production was developed by Daily Crude Oil Co. in No. 1 Jay Fulford, SE NE SE section 35-11n-5w, Ferris Township, Montcalm County, where operators had experienced difficulty cementing off bottom water after striking oil in the Dundee limestone at 3,197 feet. The well is a half mile northward extension of the field. It was previously abandoned by Wing Brothers when it failed to strike gas in the Marshall formation.

Though it had been previously drilled into the Dundee with a reported larger initial, Rex Oil & Gas Co. finally placed the No. 1 H. J. Fisher, SW SE SE section 36, Ferris Township, on the pump for 100 bbls. a day on the eastern edge of the field.

On the west edge of the field, A-B-T Trustees struck a good show of oil in the Traverse formation in No. 1 Strait, NE SE SW section 34, Ferris Township, to be tested for possible commercial production before continuing to the Dundee.

Max Pray also had several hundred feet of oil in the hole in No. 1 Strait, SW NW NW section 3-10n-5w, Crystal Township, scheduled for acid treatment at 3,205 feet after being plugged back with cement from 3,208 feet, total depth, where water was encountered.

Two other Crystal field tests were nearing Dundee completion last week by the Snyder Drilling Corp. on the No. 2 Claude Mangus, SE NE SW section 36, Ferris, and Burnstein Oil & Gas Corp. on the No. 1 W. J. Kirker, SW SE NE section 35, same township.

Ogemaw County

Morris-Barnes Oil & Gas Corp. added about 35 bbls. daily production by completion of No. 5 Golf Course, NE SW SE section 20-22n-2e, West Branch Township, Ogemaw County, after a shot. Dundee was topped at 2,547 feet and the well drilled to 2,741 feet.

Several other tests had been drilled into the Dundee with shows of oil but were not yet completed including W. J. Bernier No. 1 Izworski, NE NE NE section 14-22n-1e, Ogemaw Township, which reported swabbing 20 bbls. daily since a shot in the Dundee. It has not yet been treated with acid.

Isabella County

In Isabella County, where there has been a recent revival of drilling activities following completion of a 1,900-bbl. Dundee producer in Vernon Township, Leaton Oil & Gas Co. finished a dry hole, the No. 1-A Wezensky, SW SW NE section 30-15n-3w.

Offsets to the No. 1-B Durnin, largest well completed last week, were being started in every direction. J. V. Wicklund Development Co. reported the big well steadily increasing in production at the rate of about 100 bbls. a week believed due to the well drilling itself deeper with the heavy flow. Drillers barely tapped the pay sand.

Dibble Brothers No. 1 Andrew Erwin, NW NW NW section 26-16n-4w, Vernon Township, was shut down at 3,912 feet on top of the Dundee. Hyatt-Norton No. 1 State, SW NW SW section 34, Denver Township, also was reported completing.

West Michigan

Muskegon Development Co. had developed a flow of about 500,000 feet daily in No. 1 J. Wagner, C SW NE section 17-9n-14w, Ravenna Township, second small gasser in a new Muskegon County Berea field about 15 miles southeast of the old Muskegon oil and gas field. Berea was topped at 1,192 feet with gas at 1,200-06 feet shot with a time bomb. The hole is still being cleaned out. Total depth is 1,240 feet. West Michigan Consumers Co., which operate an industrial gas line in Muskegon, is interested in the well.

Robert C. Lentz, trustee, had reached 1,000 feet in No. 1 Joseph Zayacz, SE SW SW section 7, third Ravenna Township test, and was expected to reach the Berea gas sands this week.

A. S. Cochran, Muskegon contractor, was driving pipe for John Stonert No. 1 Jacob Drost, NW SE SW section 34-11n-16w, a Dalton Township wildcat started last week north of the old Muskegon oil field.

Two other west Michigan tests were dry and to be plugged and abandoned, one in Mason and the other in Manistee County. Dragoon Development Co. will abandon No. 1 W. K. Young, SW NW NW section 15-17n-15w, Logan Township, Mason County, dry in the Sylvania at 3,340 feet after a light show of oil. Formation was reported too tight to produce. Rademaker Chemical Corp. will save No. 1 Louis Sands Lumber Co., NE NW SW section 8-21n-16w, Manistee Township and county, as a brine well. It failed to produce oil or gas through the Sylvania to a depth of 2,568 feet.

Jacob Bolema set casing at 2,180 feet below the salt in No. 1 Red Wing Development Co., NW NW NW section 15, Manistee Township, and was drilling at about 2,300 feet on the way to the Sylvania.

Wildcat Developments

Pyramid Oil & Mineral Development Co. struck a show of gas and oil at about 600 feet in the No. 3 Draper, Private Claim No. 244, 7n-17e, Fort Gratiot Township, St. Clair County, a wildcat test on an island in the St. Clair River.

Shows of gas and oil were encountered at 875 feet and 1,035 feet in R. E. Leatherman No. 1 Scheffler, SE SW NE section 26-3s-8e, Van Buren Township, Wayne County, but drilling was being continued to the Clinton formation.

Charles Van Keuren and K. B. Montigel struck a light show of gas and oil about 112 feet in the Trenton limestone in No. 1 Hiawatha Sportsman Club, NE NE SW section 17-44n-9w, Garfield Township, Mackinac County, in the Upper Peninsula. It is 1,158 feet deep.

Harley Williams reported a flow of about 1,500,000 feet of shale gas at about 1,490 feet in No. 1 Hanson and Rae, SE SE SE section 15-30n-1w, Charlton Township, Otsego County, in the northern part of the Lower Peninsula. Previous show was reported at about 1,390 feet. Traverse was topped at 1,540 feet and operations had been continued to more than 2,000 feet.

Tamblyn & Martindale were drilling into the Dundee in No. 1 Buffalo Land Co., SE NE NE section 7-19n-9e, Adams Township, Arenac County, test.

Charles Teater was more than 400 feet in Trenton limestone in No. 1 Nevins, NW NW NE section 18-32n-6e, Long Rapids Township, Alpena County, in northeastern Michigan. It was the deepest active drilling test in the state at 5,670 feet, after topping the Trenton at 5,145 feet.

Two central Michigan tests being closely watched for probable completion in the Dundee this week were Max Pray No. 1 Wittig, SE SE SE section 23-11n-1w, Lafayette Township, Gratiot County, cased above the Dundee at 3,080 feet. It was Gratiot County's latest hope for oil production in a county where only gas has been developed.

Southwest Texas District

By
GEORGE WEBER

PROSPECTIVE NEW POOL IN NUECES; MYSTERY WATCHED

HOUSTON, Tex., Oct. 5.—Indications of a new producing area for Nueces County, showings in a Jim Wells wildcat, continued interest in a San Patricio County "mystery" wildcat and numerous developments in fields of Southwest Texas resulted from the week's activities in that section. Effect of heavy rains was still evident in several areas, and drilling showed no net increase for the entire section of the state.

What appears to be another field for Nueces County drew the interest of Coastal operators early in the week when the Texon Drilling Co. No. 1 Austin in Share 2, of the Chapman Subdivision, 4½ miles south of the Agua Dulce gas field, showed oil on a test. The drill stem test taken at 5,675-80 feet showed a recovery of 400 feet of oil with a working pressure of 100 pounds. Casing has been set and an early production test is expected. The oil sand is deeper than that producing gas and distillate in the Agua Dulce field to the north, the pay horizon in that field being at 4,900 feet. The discovery, if successfully completed will tend to stimulate drilling in the county. Elsewhere in Nueces County, four fields are being actively drilled, making it the most active county in the area.

In the Agua Dulce field, a test of Texon Drilling Co., was temporarily abandoned at 6,557 feet. It is No. 1 EHiff. Further effort may be made to carry it deeper.

Flour Bluff Activity

Flour Bluff is fast becoming one of the active fields in the Coastal section, with four rigs moved into the field over the past week, making a total of seven active tests now developing the new field. A good sand body and well defined structure invited the large volume of drilling going on so early in the field's development.

The Clara Driscoll field was about to gain a new producer at the week's end as Wellington Oil Co. No. 1-A Sevier drilled plugs on the sand. South of this field O. W. Killam is spudding No. 1 Sevier. Elsewhere in the county two other wildcats progressed with no shows. Between the Saxet and Saxet Heights fields, Barnsdall Oil Co. No. 1 Weil was below the producing horizon of the latter field, but was approaching sands producing in Saxet. Four miles southeast of Clarkwood Bunte Oil & Gas Co. and Woodley Petroleum Co. No. 1 Cain was standing at total depth of 4,865 feet.

Saxet and Saxet Heights

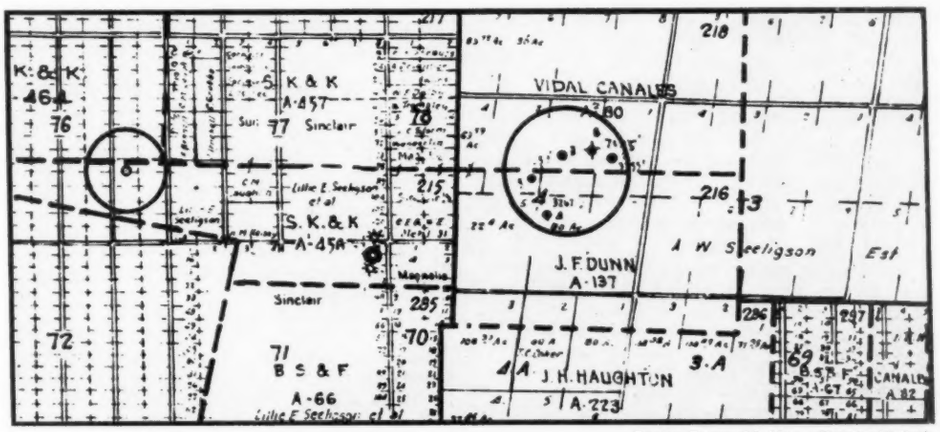
Saxet and Saxet Heights gained new producers, but nothing of particular consequence resulted from drilling in the two fields over the week. In Saxet, the W.A.R. Oil Co. No. 1 Buckholt tested 300 feet of oil on a drill stem test at 4,563-70 feet. Casing has been set, and if the test is completed it will constitute a 3,000-foot extension to the field. The test is located in Lot 4 of the Buckholt Partition. Altogether, Saxet gained ten new producers and Saxet Heights five.

Unusual interest and considerable conjecture continued in oil circles of the Lower Coast concerning the Eleanor Oil Co. No. 1 Kline. The test is reported to have drilled plugs on casing set at 6,485 feet, and is now thought to be cleaning hole for perforator. Nothing definitely authentic was available. The same company has begun moving equipment on a location about 8,000 feet north of No. 1 Kline, to be known as No. 1 Toland, in section 15, Block "A" of the Coleman Fulton Pasture Subd. These two tests constitute San Patricio County's only wildcats at present.

In the Taft field during the week, operations resulted in completion of three producers: Cage Production Co. No. 4 Mayo, Conroe Drilling Co. No. 1 Pullin, and Humble Oil & Refining Co. No. 8 Mayo. In the White Point field attempts were begun to bring in Earl Calloway No. 1 White Point Development Co. into production from a sand previously passed up. From a total depth of 6,512 feet operators were plugging back to sand at 4,900-15 feet which showed saturation on an electrical survey run on the hole.

Jim Wells County

Considerable interest attended the acquisition of the Graddy No. 1 Bennett, a prospective producer in Jim Wells County, by Tom Graham of Corpus Christi. The wildcat last week showed 280 feet of pipe line oil in a drill stem test at 2,343-65 feet. The new operator is now washing the well in for completion. This test is located in the much-subdivided area lying in the vicinity of Premont. It is about 2 miles west of the small Premont field, and about 5 miles northwest of the town itself. Due to the multiplicity of ownership in the area, the clearing of titles is a very important factor in drilling and developing the prospect.



—Porter Regenold, Maps, Corpus Christi.

Tom Graham has taken over the old Graddy No. 1 Bennett in Jim Wells County and will attempt to complete it. The test is in section 76, 5 miles northwest of Premont

Duval County fields retained normal activity, with increases evident in some of the smaller producing areas. The Colmena field, which was recently brought into oil production, gained one new producer and a second was nearing completion. Conservative Oil Co. No. 1 Sun-D.C.R.C. in Survey 51 was brought in for a pumper and the same company's No. 3 D.C.R.C. was on the sand.

Difficulty is being encountered in completing Rogers & Rogers No. 1 Valdez, a test in the newly discovered El Mesquite field of southeastern Duval County.

Government Wells Again Active

Another field gaining in activity is Government Wells, which has been relatively dormant for the past year. The opening of oil production in the lower Loma Novia sand in this field is bringing additional drilling. One producer was completed during the week, and three rigs were in the field.

Loma Novia and Seven Sisters, centers of activity in north central Duval County, gained eight and seven new wells respectively during the week. In the latter field, extensions are being made continuously, with several of the 10 rigs in the field on edge and outpost locations.

To the west, on the Duval-Webb County border, Lopez and O'Hern are showing gains in development. Lopez is being extended further to the northeast as new producers are completed in the Peal and Peters leases. O'Hern is experiencing a revival of drilling, resulting from the completion of two large producers recently. Seven rigs are now in the field.

In Zapata County, the recent spurt of drilling in the shallow Haynes field continues to add to producers in that field. The depth of the producing formation around 1,000 feet, and the ease of drilling contribute to rapid development of the field.

Wildcatting Increases

Wildcatting and small field operations gained through the Jackson Trend and surrounding counties during the week. In Bee County, the Foley and Voss fields are seeing added drilling. In the former, the Siznod Oil Corp. No. 1 Holzmark recovered a reported 40 feet of oil and mud on a drill stem test at 4,082-4,101 feet and was running casing. If completed for a producer it will extend the Foley field one-quarter mile to the northwest. To the northwest, the Voss field has two tests on the sand for anticipated early completions.

Goliad County's two wildcats showed discouraging results. The California Co. No. 1 Langrebe made 1,060 feet of brackish water and 30 feet of salt water on a test at 4,840-59 feet and was plugged back further to 4,812 feet for another test. In the same county, Felmont Oil Corp. No. 1 Metz was plugged back from a total depth of 5,660 feet, to test sands encountered at 2,990 to 3,400 feet.

Jim Wells County, outside of the Bentonville field, is at its most active pitch, with six wildcats active. Beside the Graham No. 1 Bennett, at present the most important test, LaJita Corp. No. 1 Schallert tested dry gas at 500 pounds pressure in sand at 5,036-45 feet, and was coring deeper. Brooks County is also due for further exploration, with a new location made by Magnolia west of Falfurrius, and another California Co. test scheduled for the newly opened Alta Mesa field. In Jim Hogg County Meek No. 2 Martinez showed slim chances of making a producer like the No. 1,

(Continued on Page 90)

West and North Texas

By
L. E. BREDBERG

COCHRAN COUNTY PROSPECT APPEARS LIKE POOL OPENER

FORT WORTH, Tex., Oct. 5.—The most important news of the week out of West Texas carried the report of another probable discovery for the northern tier of counties in that district. C. J. Davidson and Honolulu Oil Corp., discoverers of Yoakum County's first and only production to date, in the Bennett pool, in that county, in conjunction with the Devonian Oil Co., apparently have a new pool in the making about 30 miles north and a little east of the Yoakum County discovery, in the southeast corner of Cochran County. If it makes a producer it will open the first pool in that county.

This well, on the E. B. Duggan lands, in the center of Labour 13, League 55, Oldham County School Lands, is on a block of 5,700 acres in which the three above named companies each holds a third interest. It logged free oil at 5,020-38 feet, also striking gas there, estimated at 250,000 feet, and the hole filled 1,200 feet with oil in 10 hours before it was shut in. With 1,575 feet of open hole, cavings cut down the showing and also the gravity of the oil, which was reported testing a little better than 27 degrees. Seven-inch casing has been ordered, which will be set at about 4,950 feet before the hole is cleaned and the lime tested to obtain the potentiality of the well.

This strike was made nearly one year after the Yoakum discovery of Davidson and others, Davidson later organizing the Cascade Oil Corp., which holds a one-third interest in the new discovery and block. The Yoakum discovery, elevation of 3,557 feet, was completed at a total depth of 5,090 feet, making over 500 bbls. per day and is now making 30 bbls. per hour into tanks (flowing) with no pipe line connection yet made to the discovery. The Texas Pacific Coal & Oil Co., which farmed out the Yoakum County block to Davidson and others for the drilling of that discovery, is drilling the second test in that area, and a pipe line outlet is expected to be laid, at least to the nearest point on a railroad, about 12 miles distant, if that well is completed as a producer.

The Saltmount Oil Corp., Magnolia Petroleum Co., Shell Petroleum Corp., Texas Pacific Coal & Oil Co., Texas Co., Skelly Oil Co. and others hold acreage around the Cochran discovery. When test will be made is indefinite as pipe will have to be trucked in, run and cemented and allowed to set for several days before swabbing is commenced.

This new prospect is 12 miles southeast of several abandoned tests previously drilled by the Marland Oil Co. and others, the majority of which had good showings of oil. The Humble Oil & Refining Co. thought enough of those previous showings to sink a test to the southwest of Lehman, and west of those previous tests, this year, but it also failed and was given up at a total depth of 4,910 feet.

The nearest test now drilling to the Cochran County Prospect is that of Texas Co. on the B. Slaughter lands, in Labour 83, League 38, Zavalla County School Lands, about 12 miles to the east, over in Hockley County. Another test of interest for the tier of four northern counties, Cochran, Hockley, Yoakum and Terry, is drilling about 12 miles to the east of the Yoakum discovery, over in Terry County. The Uscan Oil Co. is sinking this test on the Brownfield lands, in section 54, Block K, P.S.L. Survey. It is now shut down for cement to set at total depth of 3,634 feet.

The Continental Oil Co. had an option on some 12,000 acres in the vicinity of the new Cochran strike, on the Slaughter lands, which option was up two days after the showing of oil was made. It will no doubt be closed, on at least a good part of the lands, which will give this company the largest holdings in the new area. Other companies are expected to renew the leasing campaign in this tier of counties, which underwent a big lease and royalty play last year.

Markers on the Well

Elevation of the Cochran County well is 3,693 feet. It topped the following markers: Anhydrite at 2,212 feet; salt at 2,405 feet; Yates at 2,952 feet; first lime at 4,192 feet; pay at 5,020 feet, oil and gas. Eight and a quarter-inch casing was cemented at 3,229 feet.

Texas Into New Mexico

Bert Fields, A. W. Cherry and others have a drilling well in section 3, Block C-23, on the Daugherty and Walton lands, near the Texas-New Mexico line, which is now being tested to show if a new pool or an extension to the Leck pool is to be opened in this area, which would extend production over the Texas line into New Mexico. It is about 2 miles northwest of the Leck pool in northern Winkler County and almost on the state line. It logged oil showings in the sandy lime pay found in the area, at 3,050-55 and 3,120-41 feet, shutting down at 3,145 feet to run 5½-inch casing preparatory to testing, and drilling deeper under pressure, circulating oil instead of water.

If the test is a success, it will also help prove a connecting link between the Leck pool in Winkler County, Texas, and the Eaves pool 2¼ miles to the north in New Mexico.

Ector Extension

The wildcat outpost test of the Grisham-Hunter Corp. on the R. B. Cowden lands, in section 10, Block 45, Township 2n, T.&P. Survey, northwest corner of Ector County, and about 1 mile north of a small producer brought in a couple of years ago, is showing for a small well and consequently an extension to this isolated area. It was drilled to 4,657 feet, striking sulfur water, but was plugged back to 4,430 feet and acidized several times and now looks good for at least 30 or 40 bbls. per day. Elevation is 3,303 feet. This company abandoned a test 1 mile to the west, a couple of weeks ago, therefore the limits of the producing area are defined in that direction although extended to the north by this new well.

G. D. Chastain, independent operator of Ranger, Tex., who this year opened another producing spot in that old area 3 miles south of Ranger

Another Ector Extension

Stanolind Oil & Gas Co. No. 2-B E. B. Cowden, NE cor. section 10, Block 43, Township 2s, T.&P. Survey, is extending the Foster or Odessa area in Ector County another mile northwesterly and in line with the lone producer of the Landreth Production Co. 2 miles further north. No. 2-B Cowden is fishing for tools and line lost when gas was struck at 3,963-75 feet, increasing from 2,000,000 to 4,000,000 feet. A showing of oil was logged from 3,968-73 feet, and the test is considered sure to make a producer and likewise an extension.

Another test drilling in this area, 4 miles to the north of the Foster pool and 2 miles northeast of the Landreth-Johnson producer in section 47, Township 1s, T.&P. Survey, and over in section 42, Township 2s, Ector County, is not looking promising at this writing. It struck the first sulfur water at 4,235-70 feet and an increase in water, with some oil and 4,335-50 feet. It is now drilling ahead, and appears as a defining test on the east side of this comparatively new producing area.

An interesting well has been started in the untested area between the northernmost producer of the Goldsmith pool in section 33, Block 41, Township 1n, and the Dunning discovery in section 33, Block 45, Township 1n, T.&P. Survey, 4 miles to the northwest. It will be drilled by the Texas Pacific Coal & Oil Co., in section 31, Block 44, Township 1n.

Winkler Extension

R. H. Henderson No. 1 Daugherty, in section 33, Block 74, one-half mile northwest of the prolific Henderson area, and mentioned in this column last week, came through this week as a much better well than expected. It was acidized and flowed an average of 174 bbls. per hour on a three-hour test, and is now shut in for storage. Total depth is 3,098 feet. It extends this pool and proves up considerable more area to the north of the Hendrick field in Winkler County.

Southern Ward

Whether or not the southern Ward County production is to be linked with the Netterville pool across the river in Pecos County, remains in doubt as a test between the two areas logged showings of oil, but later drilled into salt water this week. This test well, Hal Peck and others No. 3 Reynolds, in section 12, Block 32, H.&T.C. Survey, about 1½ miles north and west of the nearest production in the Grand Falls pool, and about the same distance east of the Netterville pool, is now testing the pay streaks logged at 2,103-60 feet, before it logged salt water at 2,170 feet, which increased at 2,175 feet, where it was shut down.

Deeper Pay in Tubbs Pool

Loffland Brothers and others No. 2 Gulf-Tubb, section 9, Block B-27, in the Tubb or Sand Hills pool in western Crane County, has apparently logged a new and deeper pay zone for that pool, which has yielded the greatest number of surprises of any pool yet drilled in the Permian district, first getting production below sulfur water in the discovery well, then yielding the first Ordovician producer in the district outside of the Big Lake field in Reagan County. This new well picked up only a small amount of oil in the regu-

lar pay zone found in the 4,350-4,400-foot level and was drilled deeper. It picked up saturated lime at 4,620-28 feet and shut down to make a test, filling the hole with oil and heading when bailed. It will probably be acidized or shot, or both, and completed at the present depth of 4,628 feet, thereby proving the third producing zone for the pool, in which eight wells are producing from the regular Tubb horizon, the Permian lime, and one from the Simpson (Ordovician).

Wildcat Locations

Four wildcat locations were reported in West Texas, one of them a well spudded and machine being rigged up on another. H. E. Ogden and others have staked location for No. 1 E. C. Rawlins, in section 391, Block 1-A, H.&T.C. Survey, about 4 miles north of Bronte in Coke County, an extreme wildcat. W. L. Pickens and others made location for a wildcat on the Lewright lands, in section 1, Block C-37, P.S.L. Survey, Loving County, and A. H. Flaherty is rigging up a machine on location on the J. C. Cunningham lands, in section 25, Block 11, H.&G.N. Survey, 6 miles southeast of Girvin, in Pecos County. This is also a wildcat. Webb Brothers of San Angelo have shut down at 70 feet on their new test on the J. F. Schrivener lands, in the Krending Survey 1,663, 3 miles north and east of Van Court, in Tom Green County.

Ellis & Eubanks are abandoning No. 1 C. C. Wourland, wildcat, located in section 15, Block 21, T.&P. Survey, 6½ miles northeast of Sweetwater in southern Fisher County. It struck water at 3,415-29 and 3,434-36 feet and is shut down at the latter depth.

Three wildcats were abandoned in the district this week, two in Jones County and one in McCulloch. Their records will be found in the accompanying completion report.

Ranger and Wichita Falls Districts

Another Ordovician test drilled northeast of Oplin in southern Callahan County, has proved nonproductive and is being plugged at a total depth of 4,550 feet, the contract depth. This test, Hal Hughes and others No. 1 T. A. Irwin, in section 349, George W. Denton Survey, 3 miles northeast of Oplin, logged gas showings at 4,200, 4,487 and 4,492 feet, showing oil in the Ellenberger, but ran into sulfur water at 4,492 feet. A second test may be drilled on the block.

A. V. Jones and H. R. Stasney, geologists of Albany, Tex., who have been operating with the Reliance Oil Royalty Corp. in Jones and Shackelford counties, sold their three-fourths joint interest in 187 acres, including five wells producing from the Bluff Creek sand around 1,600 feet, in section 190, E. T. Survey, in the western part of the county, to W. E. Butler of Dallas. Consideration was reported as $150,000. Daily allowable for the wells is 226 bbls. out of the potential of 1,200 bbls.

Ellenberger Test Dry

The Seaboard Oil Corp. plugged its No. 1 L. V. Garrett, 4 miles east of Dublin in Erath County, at a total depth of 4,110 feet in the deep lime. The company is expected to drill a test immediately on its Fairy area, in Hamilton County, where it holds a block of some 22,000 acres.

New Young County Pool

Helmerich & Payne of Tulsa have a new well and probably a new pool in the making in eastern Young County, 5 miles west of the Bryson pool in Jack County and 7 miles northeast of Graham in Young County. The well, located on the M. K. Graham lands, in the B.B.B.&C. Survey, is now shut down and is to set casing after logging sand at 3,615 feet, drilling 2 feet in same and starting to flow. This opens another deep sand pool for Young County, in which a number of deep wells have recently been completed, some of them opening new areas while others extended comparatively new producing areas.

Cooke County

The Big Indian Oil & Development Co. has spudded a 2,000-foot test on the T. L. McFadden tract in the E. W. Cullen Survey, 7 miles southeast of Gainesville, in Cooke County. If production is not found at this depth it will perhaps be carried deeper.

On the southwest side of the Anderson-Kerr pool, 3 miles east of Gainesville in Cooke County, a dry hole has been drilled on the V. D. Fandall lands. It was abandoned at a total depth of 2,540 feet after testing salt water. This adds another direction in which the field has been defined, leaving only the north side undefined.

Grayson County

Reports are to the effect that a 4,200-foot test is preparing to get under way on the Singleterry tract, Charles Quillen Survey, near Collinsville in Grayson County, and another test is to be drilled on a block of some 6,000 acres in the northwest part of Grayson County. Location is reported for the J. A. L. Wolfe lands in the James McLaughlin Survey, and O. L. Derrick will drill the well. Later on a 6,000-foot test is to be drilled by the Port Bolivar Oil & Refining Co., which is now drilling a test just over the Grayson County line in Collin County. Location is on the A. Sherley tract adjoining the Anna townsite on the east, 2½ miles east of a test drilled by the company last year, which was junked and abandoned around 3,000 feet.

Panhandle

C. A. Fluty of Oklahoma City and Henry Rosenthal of Wichita, Kans., are preparing to sink a test on their block of some 7,000 acres 2 miles southwest of Quanah in Hardeman County. Location is on the H. W. Stringer lands, in section 180, and machinery is being moved in.

The Texas Pipe Line Co. has been checking the production of the Anderson-Kerr pool in Cooke County with the idea of laying a connecting line into it. Two loading racks with connecting lines and two local refineries, with one other refinery soon to be completed in the area, are taking all the oil. There are now 54 wells in the pool, which has an allowable of 2,317 bbls. per day. The operators doing their own prorating on a voluntary basis.

Montague Wildcat

P. Frost and others are drilling a 3,500-foot test on a block of some 4,000 acres 4 miles south of the town of Montague in the county of that name. It is in wildcat territory.

W. C. Endicott and others have assembled a block of some 3,000 acres centering in the F. Askey Survey No. 10, Grayson County, 3 miles southeast of Tom Bean, and are to drill a 3,500-foot test. A dry hole in the area went to 5,046 feet. It had showings of gas around 4,000 feet.

Heavy rains have helped the drilling situation in the North Central Texas district, many rigs renewing activity after a long shut down caused by drought. There is plenty of drilling water in the district now.

Collingsworth Test

Charles M. Barnes has staked location for an extreme wildcat test on the Gideon Bell lands, in section 14, Block 13, H.&G.N. Survey, 13 miles southeast of Shamrock in Collingsworth County, Panhandle district. It is a mile north of a dry hole drilled to 2,216 feet by Anderson & Kerr in section 6, which had showings of oil and gas. This makes another wildcat for a district that is apparently an outcast as far as wildcatting is concerned.

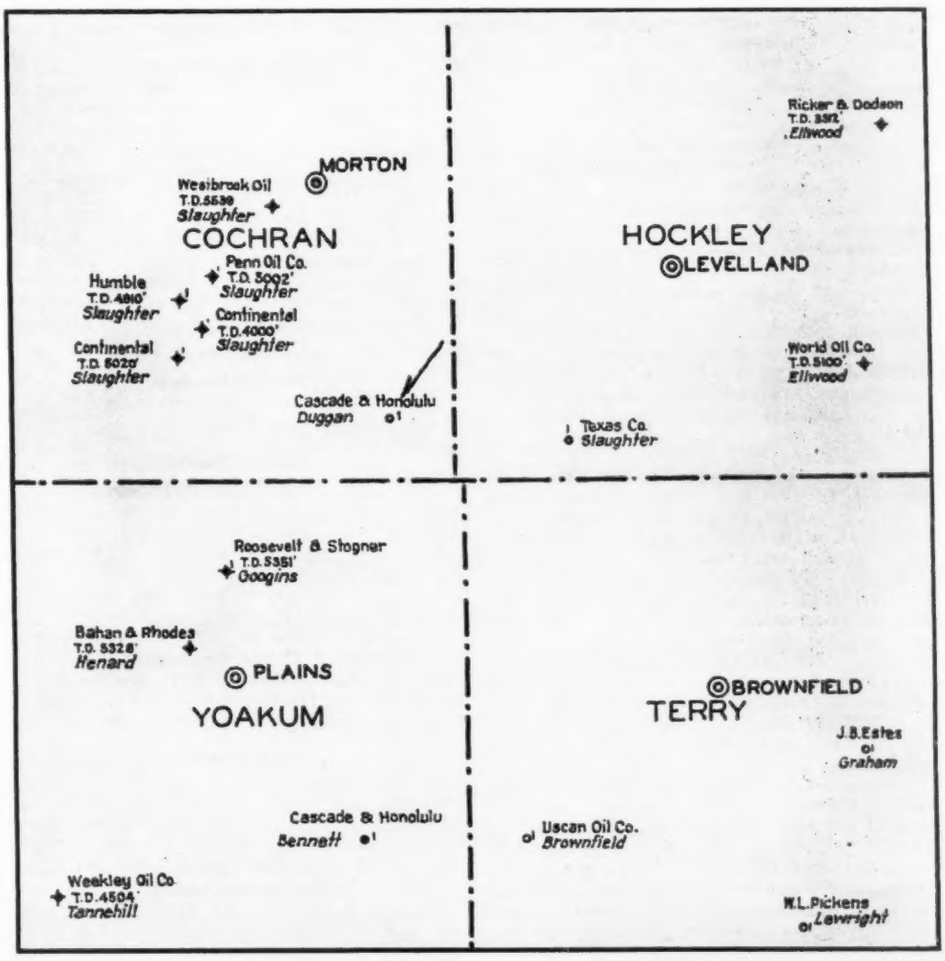
Another wildcat for the district may be drilled in the Kirkland area of Childress County, where two dry holes have already been abandoned, although one of them made a little oil. A block is now being assembled in the area with the idea of drilling a deep test on same.

WEST TEXAS COMPLETIONS

Crane County

Dickinson and Moore Corp. No. 1 Hughes, 2,812-2,343 feet, acidized, 340 bbls.

Gulf Oil Corp. No. 138 McElroy, 2,773-2,995 feet, 822 bbls.; Continental Oil Co. No. 5-C Cowden, 2,324-2,465 feet, shot, 223 bbls.; Gulf Oil Corp.



—Southwest Mapping Co., Fort Worth.

Cascade and Honolulu Oil Corp. No. 1 Duggan, extreme wildcat well which is looming as a discovery for Cochran, one of the northern tier of West Texas counties. It appears sure to make a producer, thereby opening this county's first oil production

No. 2 Tubbs, 4,315-91 feet, acidized, 1,404 bbls. in four hours; Humble Oil & Refining Co. No. 3 Tubbs, 4,358-4,410 feet, acidized, 1,302 bbls. in six hours; Hollyfield & McFarlane No. 1 Mosley, temporarily abandoned, 2,574 feet. Elevation 2,373 feet.

Ector County

Amerada Petroleum Corp. No. 1 Cummins, 4,113-4,391 feet, acidized, 458 bbls. through three-quarters inch choke. Continental Oil Co. No. 3 Holt, 4,171-4,333 feet, shot, 125 bbls. of oil and 25 bbls. of water. Sinclair Prairie Oil Co. No. 1 Smith, 4,120-4,280 feet, shot, 320 bbls. Sun Oil Co. No. 8-A Wight, 4,100-4,278 feet, shot, 564 bbls.

Owenwood Pool No. 3 No. 1 Wight, 4,080-4,212 feet, shot, 230 bbls.; Atlantic Oil Producing Co. and others No. 1-A Blakeney, 4,070-4,230 feet, shot, 508 bbls.

Fisher County

General Crude Oil Co. No. 9 Flanigan, 3,108-3,116 feet, acidized, 548 bbls.

General Crude Oil Co. No. 6 George, 3,083-3,112 feet, acidized, 136 bbls.

Gaines County

Humble Oil & Refining Co. No. 1 W. Eubanks, dry and abandoned 6,192 feet, elevation 3,365 feet.

Howard County

Continental Oil Co. No. 12 Overton, 2,319-2,425 feet, 480 bbls.; No. 6 Kloh, 2,325-50 feet, acidized, 970 bbls.

Jones County

H. C. Owens and others No. 1 Arnwine, dry and abandoned 634 feet. T. D. Humphrey No. 1 Rushing, dry and abandoned 2,732 feet.

McCulloch County

M. Hill No. 1 McCall and Curtis, dry and abandoned 1,526 feet.

Pecos County

Stanolind Oil & Gas Co. No. 7 Toborg, dry and abandoned, 450 feet; Ohio Oil Co. No. 51-A Yates, 1,506-35 feet, 365 bbls. per hour; No. 28 Smith-Taylor, 1,460-1,637 feet, 330 bbls. per hour; No. 14-G Yates, 1,188-1,253 feet, 1,907 bbls. per hour; Cardinal Oil Co. No. 1 White and Baker, dry and abandoned, 1,662 feet; elevation 2,650 feet.

Upton County

J. McLester No. 1 Hughes, 2,640-2,745 feet, acidized, 212 bbls.; H. Nolan No. 1 Skelly-Lane, 2,025-2,088 feet, 200 bbls. fluid in 15 hours, 10 per cent water; Rodman and Easter No. 1 Burleson, 2,160-87 feet, acidized, 473 bbls.; Dick Brothers No. 1 Robbins, 2,180-2,233 feet; acidized, 999 bbls.

Homestead Oil & Gas Co. No. 1 Powell, 2,640-2,822 feet, 35 bbls. Humble Oil & Refining Co. No. 2 Reese, 2,572-2,650 feet, acidized, 15 bbls. per hour. Gulf Oil Corp. No. 21 Crier-McElroy, 2,717-2,800 feet, 72 bbls. J. W. Ellis No. 3-B Robbins, 2,139-77 feet, 766 bbls. Texas Pacific Coal & Oil Co. No. No. 24-A Lane, 2,165-75 feet, acidized, 451 bbls.

Ward County

Clyde Bradford and others No. 1-B Allen, 2,634 feet, shot, 1,500,000 feet of gas; Stanolind Oil & Gas Co. No. 2 W. E. Cannon, 2,230-2,400 feet, shot, 237 bbls.; Gulf Oil Corp. No. 2 Estes, 2,921-28 feet, shot, 293 bbls.; No. 4 Estes, 2,422-2,575 feet, shot, 3,308 bbls.; California Co. No. 6 Adams, 2,484-2,600 feet, 147 bbls.; No. 141 Durgin, 2,317-2,515 feet, shot, 210 bbls.; F.H.E. Oil Co. No. 3-B Maxwell, 2,275-2,385 feet, shot, 566 bbls.; Kirk and Anderson No. 2 California-Allen, 2,170-2,256 feet, shot, 5 bbls.; Rio Bravo Oil Co. No. 11 Alcott, 2,195-2,488 feet, shot, 723 bbls.; Richardson Oils, Inc., No. 5 Hathaway, 2,445-2,622 feet, shot, 2,168 bbls.; Eppenauer Drilling Co. No. 1 University, 2,749 feet, shot, 865 bbls.

Leidecker No. 4 Shell-Sloan, 2,500-3,045 feet, acidized, 920 bbls. Gulf Oil Corp. No. 1 Estes, 2,429-2,951 feet, shot, 535 bbls.; No. 56 Hutchins, 2,585-2,775 feet, shot, 701 bbls. F.H.E. Oil Co. No. 2 Green, 2,279-2,385 feet, 23 bbls. Ice and Luce No. 3 Baker, 2,477-3,082 feet, shot, 437 bbls. California Co. No. 2 Hardage and Wilson, 2,436-2,520 feet, shot, 357 bbls.; No. 36 Gordon, 2,366-2,519 feet, shot, 411 bbls. Richardson Oils, Inc., No. 6 Hathaway, 2,470-2,595 feet, shot, 2,197 bbls.

Winkler County

Illinois Oil Co. No. 1-B Central State Bank of Abilene, 2,915-3,140 feet, shot, 705 bbls.; No. 2-B Central State Bank of Abilene, 2,925-3,140 feet, shot, 825 bbls. Humble Oil & Refining Co. No. 1-C Colby, 2,810-2,986 feet, shot, 809 bbls.; No. 6-A Colby, 2,840-3,105 feet, 1,097 bbls.; No. 14 Howe, 2,786-2,995 feet, shot, 1,148 bbls. Eastland Oil Co. No. 1 Clapp, 2,790-3,107 feet, 1,153 bbls. Sayre Oil Co. No. 4-C Howe, 2,844-3,000 feet, shot, 984 bbls.

Magnolia Petroleum Co. No. 3 Colby, 2,955-3,130 feet, shot, 240 bbls.; No. 34 Walton, 2,825-2,937 feet, shot, 706 bbls.; McCurdy and McCurdy No. 2 W. A. McCutcheon, 2,799-2,967 feet, shot, 1,473 bbls.; Wahlenmaier and others No. 2 Leck, 3,040-84 feet, 2,391 bbls.; Texas Pacific Coal & Oil Co. No. 14 Daugherty, 2,794-2,935 feet, shot, 970 bbls.; Gulf Oil Corp. No. 9 Daugherty, total depth 3,000 feet, shot, 1,106 bbls.; Empire Gas & Fuel Co. No. 5-D Daugherty, 2,780-3,030 feet, shot, 996 bbls.; Bert Fields and others No. 1 Pure-Cowden, 2,934-3,000 feet, shot, 507 bbls.

Yoakum County

Roosevelt and Stogner No. 1 Roosevelt, dry and abandoned 5,351 feet; elevation 3,712 feet.

PANHANDLE COMPLETIONS

Carson County

Huber Petroleum Corp. No. 1-R Burnett, 2,150-2,244 feet, 67,187,000 feet of gas; Texas Co. No. 2 Schafer, 2,980-3,135 feet, shot, 292 bbls. on pump.

Gray County

Champlin Oil & Refining Co. No. 12 McLaughlin, 2,950-3,050 feet, 862 bbls. on pump; Magnolia Petroleum Co. No. 6 Haggard, 3,242-3,329 feet, shot, 584 bbls. on pump.

Hutchinson County

Niapa Oil Co. No. 4 Haile, 3,086 feet, plugged back to 3,076 feet, shot; Phillips Petroleum No. 1 Snow, 2,350-2,690 feet, shot, 32,810,000 feet of gas.

Moore County

Shamrock Oil & Gas Co. No. 1 Brumley-Sunray, 3,410-18 feet, 397 bbls. of fluid, 2½ per cent water.

Wheeler County

Dumar Oil & Gas Co. No. 1 Wallace, 1,722-1,805 feet, 47,286,000 feet of gas; Elbar Oil Corp. No. 9 Noel, 2,421-31 feet, 438 bbls.; Palmer and others No. 1 Valenick, 2,080-2,233 feet, 29,343,000 feet gas.

NORTH TEXAS COMPLETIONS

Archer County

L. T. Burns No. 2 C. L. Abercrombie, 1,528 feet, dry; Burns & Long No. 21 Turbeville, 1,517 feet, dry; Consolidated Oil Co. No. 10 Portwood, 1,431-34 feet, 300 bbls.; F. E. Haynes No. 1 William Coleman, 2,232 feet, dry; W. H. Junker No. 3 Junker-Kunkel, 1,268 feet, dry.

Baylor County

Consolidated Oil Co. No. 3 W. H. Portwood U, 1,431-36 feet, 25 bbls.

Cooke County

Anderson-Kerr No. 4 Hill, 1,960-82 feet, 92 bbls.; Burk Royalty Co. No. 1 Mrs. C. A. Brown, 1,970-90 feet, 450 bbls.; Joe De Grazier No. 4 E. P. Bell, 1,946-62 feet, 122 bbls.; Homarado Oil Co. No. 4 Ed Wilson, 1,949-59 feet, 500 bbls.; F. W. Merrick, Inc., No. 4 J. W. Muerer, 806-23 feet, 3 bbls.; Leo Portman No. 2 T. C. Delisle, 2,097-2,110 feet, 500 bbls.; Seitz Comegys No. 5 R. W. Trew, 689-710 feet, 10 bbls.; J. C. Shaffer No. 4 L. M. Curry, 2,094-2,140 feet, 575 bbls.; J. C. Shaffer No. 2 W. H. Jarrett, 2,111-26 feet, 300 bbls.; Wertheimer, Devine & Roach No. 1 W. A. Erwin, 1,229 feet, dry.

Jack County

Bennett Petroleum Corp. No. 1 W. J. Chambers, 2,920-62 feet, 350 bbls.; Compton Oil Co. No. 4 Loving, 450 feet, dry; Compton Oil Co. No. 5 Loving, 427 feet, dry; Mullendore and others No. 1 Mrs. D. C. Clayton, 2,943-3,008 feet, 250 bbls.

Montague County

Bridwell Oil Co. No. 8 J. S. Dennis A, 1,662 feet, dry; Sinclair Prairie and others No. 2 C. Holt, 1,697-1,710 feet, 25 bbls.

Wichita County

Continental Oil Co. No. 17 Marriott, 1,768-1,778 feet, 25 bbls.; Hamilton Petroleum Co. No. 1 W. T. Waggoner, 1,940-2,003 feet, 50 bbls.; J. L. Pyle No. 2 Munger, 1,097-99 feet, 23 bbls.; Sussex Oil Co. No. 1 L. O. Saunders, 1,867-70 feet, 200 bbls.; Wilson & Ligon No. 1 Foster Allen, 1,270-82 feet, 50 bbls.

Young County

C. A. Montgomery No. 1 Remington, 727 feet, dry; Panhandle Refining Co. No. 5 Prideaux, 707-26 feet, 125 bbls.; E. C. Reed No. 3 H. P. Cunningham, 570 feet, dry; White & Duncan No. 1 Prideaux, 726 feet, dry.

East Texas Fields

(Continued from Page 78)

Roberson, 3,540-95 feet, 6 bbls. per hour on pump. Magnolia Petroleum Co. No. 17 Moore, 3,672-80 feet, 18 bbls. in 15 minutes.

Smith County

H. Hanbury No. 8 Sharp, 3,687-88 feet, 32 bbls. per hour; No. 9 Sharp, 3,716-17 feet, 15 bbls. in 30 minutes. Alex McCutchin No. 5 Attaway-Stone, 3,813-14 feet, 50 bbls. per hour; No. 4 Stone, 3,753-54 feet, 45 bbls. in 80 minutes. Texas-Gulf Petroleum Co. No. 14 Hodnott-Melton, 3,688-89 feet, 20 bbls. per hour. Wheelis Oil Corp. No. 110 Patterson, 3,724-25 feet, 20 bbls. in 2 hours on gas lift.

Upshur County

Sun Oil Co. No. 6 Johnson, 3,593-94 feet, 20 bbls. per hour on pump.

MISCELLANEOUS COMPLETIONS IN EAST TEXAS

Anderson County

Roeser & Pendleton, Inc., No. 7 Ware and Wilson, 4,037 feet, 45 bbls. in 24 hours through one-eighth inch choke. Tide Water and Seaboard Oil Corp. No. 15 Edens, 7,570 feet, 443 bbls. distillate in 24 hours through one-fourth inch and three-eighths inch casing choke and one-half and three-eighths inch tubing choke, elevation 313 feet; No. 6 Monnig, 5,265 feet, 67 bbls. in 24 hours through one-eighth inch choke, 36.19 per cent b.s. and water.

Angelina County

T. L. Harris No. 1 fee, dry and abandoned 1,344 feet, elevation 232 feet, 4½ miles NE of Huntington. Till LaRue No. 1 Cameron Lumber Co., near Huntington, total depth 1,358 feet, pumped 5 bbls. in one week. Shut in. Elevation 297 feet.

Franklin County

R. B. & H. Oil Co. No. 1-B Phillips, 4,294-4,339 feet, 22 bbls. per hour on pump.

Freestone County

Stanolind Oil & Gas Co. No. 1 Cullinan, 4,027 feet, 82 bbls. in 12 hours through one-eighth inch choke.

Navarro County

Henry Pryor No. 1 A. Edens, dry and abandoned 708 feet, 1 mile NE of Angus.

Titus County

Grey & Wolfe No. 2 McElroy, 4,361 feet, 6 bbls. per hour, swabbing and flowing. Humble Oil & Refining Co. No. 15 King and Hughes, 4,316 feet, 222 bbls. in 24 hours on pump; No. 1 Sullivan, total depth 4,352 feet. Plugged back to 4,266 feet, 88 bbls. in 24 hours on pump; 1.4 per cent salt water.

Southwest Texas Fields

(Continued from Page 87)

discovery well of the Colorado field. The No. 2 showed 15 feet of oil and mud with no pressure on a drill stem test at 2,986-3,009 feet and operators were running a Schlumberger survey of the hole.

The Balcones Fault Zone and Edwards Plateau in Southwest Texas show drilling activity practically at a standstill, with exception of small field operations in Caldwell, Bexar and Guadalupe Counties. Atascosa County prospects were darkened during the week by abandonment of Atascosa Trust No. 1 Domsch. The wildcat, bottomed at 4,008 feet had shows of production, but continued acid treating failed to produce oil in commercial quantities. In the same county, Helvetia Oil Co. No. 1 Pratt is drilling below 3,500 feet.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil Co., No. 16 Capitan, Santa Barbara Co.	32- 5-30	1,375	hd. sd. drlg.
Shell Oil Co., No. 4 Capitan, Santa Barbara Co.	32- 5-30	1,758	pump. 430 b.d.
General Pet. Corp., No. 16 Capitan, Santa Barbara Co.	32- 5-30	2,920	shut in
General Pet. Corp., No. 19 Capitan, Santa Barbara Co.	32- 5-30	595	sd. sh. drlg.
Texas Co., No. 1 Capitan, Santa Barbara Co.	1- 4-31	721	hd. sd. drlg.
Barnsdall-Rio Grande, No. 1 Elwood, Santa Barbara	15- 4-29	3,604	C.P. 3,534
Signal Oil Co., No. 8 Elwood, Santa Barbara Co.	tideland	1,520	sd. sh. drlg.
Bush Oil Co., No. 2 Santa Maria, Santa Barbara Co.	25-10-34	4,285	shut in
Field Gasoline Corp., No. 1 Santa Maria, Santa Barbara	21- 9-33	2,251	sd. sh. drlg.
Apache Oil Co., No. 1 Santa Maria, Santa Barbara Co.	31- 9-33	3,672	sd. sh. drlg.
Union Oil Co., No. 1 Santa Maria, Santa Barbara Co.	24-10-34	2,240	br. sh. drlg.
Union Oil Co., No. 11 Santa Maria, Santa Barbara Co.	26- 9-34	3,806	sd. sh. drlg.
Todos Santos Oil Co., No. 1 Casmalia, Santa Barbara	29- 9-34	2,000	sd. sh. drlg.
Moore, Inc., No. 1 Santa Maria, Santa Barbara Co.	25-10-35	6,800	gr. sh. drlg.
Top Row Oil Co., No. 1 Lompoc, Santa Barbara Co.	10- 6-35	1,054	hd. sd. drlg.
Bankline Oil Co., No. 1 Coal Oil Pt., Santa Barbara	tideland	5,510	P.B. 4,187
Calkan Pet. Co., No. 1 Sespe, Ventura Co.	23- 5-20	904	cleaning out
Union Oil Co., No. 10 Bardsdale, Ventura Co.	12- 3-20	6,561	cleaning out
Merchants Pet. Co., No. 1 Sespe, Ventura Co.	1- 4-20	140	sd. sh. drlg.
Texas Co., No. 131, Shiells, Ventura Co.	4- 3-19	3,355	cleaning out
El Rancho Oil Co., No. 1 Sespe, Ventura Co.	9- 3-19	5,107	P.B. 4,990
Topa Topa Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	2,200	cmtd.
Wasibi Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	998	cleaning out
Oil Ridge Oil Co., No. 1 Hopper Canyon, Ventura Co.	6- 4-18	2,632	hd. sh. drlg.
Bolsa Chica Oil Co., No. 4 Temescal, Ventura Co.	4- 4-18	2,864	br. sh. drlg.
Pacific Western Oil Co., No. 6 Temescal, Ventura Co.	4- 4-18	543	sd. sh. drlg.
Sunset Oil Co., No. 1 Temescal, Ventura Co.	21- 4-18	1,640	redrlg. 1,581
Associated Oil Co., No. 1 Wiley Canyon, Ventura Co.	6- 3-18	....	bldg. road
Rennie Brothers, No. 1 Santa Paula, Ventura Co.	21- 4-21	1,040	C.P. 320
Munding, J. J., No. 1 Ojai, Ventura Co.	22- 4-22	959	fishing
Texas Co., No. 1 Saticoy, Ventura Co.	6- 2-21	4,487	gr. sd. drlg.
Ventura Expl. Co., No. 1 Saticoy, Ventura Co.	30- 3-22	9,525	swabbing
Vaca Oil Co., No. 1 Oxnard, Ventura Co.	5- 1-21	2,822	tar sand
Continental Oil Co., No. 5 San Miguelito, Ventura Co.	24- 3-24	7,040	flow, 1,485 b.d.
General Pet. Corp., No. 1 Padre Canyon, Ventura Co.	15- 3-24	2,198	bl. sh. drlg.
Continental Oil Co., No. 2 Padre Canyon, Ventura Co.	15- 3-24	5,175	sd. sh. drlg.
C. C. M. Oil Co., No. 1 Padre Canyon, Ventura Co.	15- 3-24	5,931	cleaning out
Honolulu Oil Corp., No. 1 South Mountain, Ventura Co.	23- 3-21	4,297	sd. sh. drlg.
Associated Oil Co., No. 25 V.L.W. Ventura, Ventura Co.	23- 3-23	6,296	sd. sh. drlg.
Associated Oil Co., No. 30 V.L.W. Ventura, Ventura Co.	24- 3-23	4,947	fish. D.P.
Associated Oil Co., No. 28 Lloyd Ventura, Ventura Co.	27- 3-23	1,930	sd. sh. drlg.
Shell Oil Co., No. 28 Edison Ventura, Ventura Co.	21- 3-23	6,743	cmtd. 6,629
Shell Oil Co., No. 88 Taylor Ventura, Ventura Co.	30- 3-23	6,952	sd. sh. drlg.
General Pet. Corp., No. 17 Barnard Ventura, Ventura	23- 3-23	1,176	sd. sh. drlg.
Jennings, E. P., No. 1 Alpaugh, Kern Co.	4-24-23	2,780	sd. sh. drlg.
Den Petroleum Co., No. 1 Devils Den, Kern Co.	20-25-19	1,287	redrlg. 1,075
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	6,887	P.B. 5,537
Associated Oil Co., No. 4 Lost Hills, Kern Co.	1-26-20	4,680	sd. sh. drlg.
Associated Oil Co., No. 5 Lost Hills, Kern Co.	2-26-20	1,785	pump. 460 b.d.
Lincoln Pet. Co., No. 2 Lost Hills, Kern Co.	12-26-20	1,061	sd. sh. drlg.
Universal Oil Consd., No. 1 Lost Hills, Kern Co.	20-26-21	3,498	sd. sh. drlg.
East Puente Oil Co., No. 22 McKittrick, Kern Co.	11-30-21	2,516	P.B. 1,315
Woodward, Hoke, No. 6 McKittrick, Kern Co.	11-30-21	1,162	sd. sh. drlg.
Bergman, H. L., No. 1 McKittrick, Kern Co.	30-30-22	1,621	sd. sh. drlg.
General Pet. Co., No. 1 South Belridge, Kern Co.	30-28-21	11,377	suspended
Rio Grande Oil Co., No. 1 Belridge, Kern Co.	18-28-20	2,545	P.B. 1,995
Culbertson & Sipley, No. 1 Belridge, Kern Co.	35-28-25	1,660	rebldg. rig
Associated Oil Co., No. 5 North Belridge, Kern Co.	34-27-20	8,287	hd. sh. drlg.
Belridge Oil Co., No. 12-1 North Belridge, Kern Co.	1-28-20	3,320	sd. sh. drlg.
Belridge Oil Co., No. 15-35 North Belridge, Kern Co.	35-27-20	520	sd. sh. drlg.
Belridge Oil Co., No. 5-1 North Belridge, Kern Co.	1-28-20	5,500	cmtd. 5,500
Continental Oil Co., No. 8 North Belridge, Kern Co.	36-27-20	7,831	hd. sh. drlg.
Shell Oil Co., No. 1 Antelope Plains, Kern Co.	5-28-20	3,776	gr. sd. drlg.
Associated Oil Co., No. 21 Kern Front, Kern Co.	23-28-27	2,200	water 1,957
Associated Oil Co., No. 31 Kern Front, Kern Co.	23-28-27	1,934	pump 225 b.d.
Associated Oil Co., No. 41 Kern Front, Kern Co.	23-28-27	1,953	pump. 85 b.d.
Big Eleven Oil Co., No. 1 Kern Front, Kern Co.	18-28-28	1,291	bail. water
National Oil Co., No. 3 Kern Front, Kern Co.	11-28-27	1,720	rigging up
Honolulu Oil Corp., No. 89 Kern Front, Kern Co.	8-28-27	2,800	sd. sh. drlg.
McDonald & Dearin, No. 3 Kern Front, Kern Co.	11-28-27	1,580	sd. sh. drlg.
Italo Pet. Corp., No. 33 Kern Front, Kern Co.	16-28-27	2,905	test. W.S.O.
Seven Spot Oil Co., No. 1 Kern Front, Kern Co.	13-28-27	1,970	cleaning out
Vega Oil Co., No. 2 Kern Front, Kern Co.	11-28-27	2,225	pump. 24 b.d.
Union Oil Co., No. 1 Kern Front, Kern Co.	11-28-27	2,354	P.B. 1,853
Kaar, Charles, No. 1 Kern Front, Kern Co.	26-28-27	2,250	cmtd. 2,140
Bell Corp., No. 2 McVan, Kern Co.	14-27-27	1,218	bailing
Harp, E. J., No. 1 Dominion, Kern Co.	27-26-28	1,432	P.B. 1,418
Vanguard Oil Co., No. 5 Mount Poso, Kern Co.	33-27-28	1,900	pump. 300 b.d.
Shell Oil Co., No. 15 Mount Poso Security, Kern Co.	16-27-28	1,685	cmtd. 1,679
Shell Oil Co., No. 29 Mount Poso Vedder, Kern Co.	9-27-28	1,844	pump. 648 b.d.
Chevalier, J. J., No. 1 Mount Poso Vedder, Kern Co.	3-27-28	1,455	will cmt.
General Pet. Corp., No. 8 Mount Poso Heisen, Kern Co.	16-27-28	1,662	cmtd. 1,600
Bethlehem Expl. Co., No. 2 Mount Poso, Kern Co.	10-27-27	1,570	will C.P.
Bargol Oil Co., No. 3 Mount Poso, Kern Co.	11-27-27	1,194	bailed dry
Union Oil Co., No. 1-B Mount Poso Tribe, Kern Co.	28-27-28	1,908	pump. 515 b.d.
Doyle Pet. Co., No. 1 Jasmine, Kern Co.	15-25-27	2,920	cleaning out
Hall-Baker Co., No. 20-1 Jasmine, Kern Co.	20-25-27	965	sd. sh. drlg.
Elbee Oil Co., No. 1 Fruitvale, Kern Co.	23-29-27	3,805	cleaning out
Magnet Oil Co., No. 5 Fruitvale, Kern Co.	21-29-27	4,000	sd. sh. drlg.
Western Gulf Oil Co., No. 31 Fruitvale, Kern Co.	21-29-27	3,896	cmtd.
Western Gulf Oil Co., No. 32 Fruitvale, Kern Co.	27-29-27	3,387	sd. sh. drlg.
Miami Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	3,050	sd. sh. drlg.
Oil Incorporated, No. 1 Fruitvale, Kern Co.	26-29-27	3,390	cleaning out
Nydia Pet. Co., No. 2 Fruitvale, Kern Co.	26-29-27	3,410	rig. to pump
Dixie-Lee Oil Co., No. 5 Fruitvale, Kern Co.	23-29-27	1,560	sd. sh. drlg.
Allied Pet. Co., No. 20 Mountain View, Kern Co.	19-30-29	4,476	sd. sh. drlg.
Barnsdall Oil Co., No. 8 Mountain View, Kern Co.	19-30-29	4,878	pump. 340 b.d.
Buffalo Oil Co., No. 4 Mountain View, Kern Co.	19-30-29	4,661	sd. sh. drlg.
Hogan Pet. Co., No. 16 Mountain View, Kern Co.	32-30-29	6,159	pump. 25 b.d.
Hogan Pet. Co., No. 18 Mountain View, Kern Co.	32-30-29	4,771	sd. sh. drlg.
Sheldon Oil Co., No. 2 Mountain View, Kern Co.	19-30-29	4,991	sd. sh. drlg.
Standard Oil Co., No. 32 Mountain View, Kern Co.	13-30-28	5,150	sd. sh. drlg.
Shell Oil Co., No. 11 Mountain View, Kern Co.	32-30-29	5,940	sd. sh. drlg.
Mohawk Pet. Co., No. 3 Mountain View, Kern Co.	30-30-29	5,770	will deepen
Mohawk Pet. Co., No. 4 Mountain View, Kern Co.	30-30-29	5,998	swabbing
Mohawk Pet. Co., No. 8 Mountain View, Kern Co.	30-30-29	5,275	sd. sh. drlg.
Mohawk Pet. Co., No. 2 Arvin, Kern Co.	10-31-29	5,021	sd. sh. drlg.
General Pet. Corp, No 1 Arvin, Kern Co.	26-31-29	6,651	sd. sh. drlg.
Associated Oil Co., No. 1 Arvin, Kern Co.	3-31-29	5,251	sd. sh. drlg.
Shell Oil Co., No. 1 Arvin, Kern Co.	15-31-29	5,876	sd. sh. drlg.
Ohio Oil Co., No. 1-E Rio Bravo, Kern Co.	19-30-26	5,661	sd. sh. drlg.
Associated Oil Co., No. 1 Rio Bravo, Kern Co.	30-29-25	5,453	sd. sh. drlg.
Standard Oil Co., No. 11-1 Rio Bravo, Kern Co.	19-29-26	2,997	sd. sh. drlg.
Plute Holding Co., No. 1 Round Mountain, Kern Co.	17-28-29	716	sd. sh. drlg.
Shell Oil Co., No. 11 Freeman Round Mountain, Kern	20-28-29	1,161	sd. sh. drlg.
Shell Oil Co., No. 1-8 Cleese Round Mountain, Kern	17-28-29	1,560	sd. sh. drlg.
Cole & Wood, No. 1 Edison, Kern Co.	24-30-29	821	dry; abd.
Jergins Trust, No. 23-4 Edison, Kern Co.	23-30-29	1,864	cmtd. 1,820
Jergins Trust, No. 23-5 Edison, Kern Co.	23-30-29	1,995	rig. to pump
Wood-Callahan Oil Co., No. 5 Edison, Kern Co.	23-30-29	2,171	C.O. 2,171
Bender, E. A., No. 1 San Emidio, Kern Co.	14-10-23	1,236	P.B. 900
Texas Co., No. 1 San Emidio, Kern Co.	11-11-22	9,554	sd. sh. drlg.
Standard Oil Co., No. 9-1 Ten Section, Kern Co.	34-30-26	1,491	sd. sh. drlg.
Standard Oil Co., No. 10-1 Ten Section, Kern Co.	20-30-26	7,141	sd. sh. drlg.
Shell Oil Co., No. 2 Ten Section, Kern Co.	29-30-26	8,483	O.S. drlg.
Fenray Oil Co., No. 1 Midway-Sunset, Kern Co.	34-32-24	4,210	redrlg. 3,415
C. C. M. Oil Co., No. 1-28 Midway-Sunset, Kern Co.	28-32-23	3,298	br. sh. drlg.
C. C. M. Oil Co., No. 19-21 Midway-Sunset, Kern Co.	21-32-23	2,362	sd. sh. drlg.
C. C. M. Oil Co., No. 20-21 Midway-Sunset, Kern Co.	21-32-23	1,331	sd. sh. drlg.
Evans, H. B., No. 11 Midway-Sunset, Kern Co.	35-32-23	2,330	rig. to pump
Burkholder Oil Co., No. 1 Midway-Sunset, Kern Co.	25-32-23	2,536	will deepen
Burkholder Oil Co., No. 2 Midway-Sunset, Kern Co.	25-32-23	1,570	sd. sh. drlg.
Safeway Oil Co., No. 1 Midway-Sunset, Kern Co.	36-32-23	2,815	P.B. 2,799
Garner Royalties, No. 7 Midway-Sunset, Kern Co.	22-32-23	1,651	perf. 1,000-31
Alford Oil Co., No. 6 Midway-Sunset, Kern Co.	25-12-24	1,230	sd. sh. drlg.
Hallmark Oil Co., No. 5 Midway-Sunset, Kern Co.	25-12-24	2,531	sd. sh. drlg.
Merritt-Annex Oil Co., No. 4 Midway-Sunset, Kern Co.	25-12-24	1,580	sd. sh. drlg.
Zamloch, Carl, No. 1 Midway-Sunset, Kern Co.	22-32-23	1,866	sd. sh. drlg.
Shephard Oil Co., No. 1 Midway-Sunset, Kern Co.	12-11-24	574	sd. sh. drlg.
Standard Oil Co., No 3-25-L Midway-Sunset, Kern Co.	25-12-24	3,224	cleaning out
Standard Oil Co., No. 20-33-D Midway-Sunset, Kern	26-12-24	3,473	cmtd. 3,443
Five Points Oil Co., No. 2 Midway-Sunset, Kern Co.	18-11-23	1,186	sd. sh. drlg.
Pomoc Oil Co., No. 8 Midway-Sunset, Kern Co.	15-32-23	2,460	sd. sh. drlg.
Goldman, Frank, No. 3 Midway-Sunset, Kern Co.	22-32-23	2,122	pump. 580 b.d.
Birch-Ranch Oil Co., No. 1 Midway-Sunset, Kern Co.	22-32-23	1,353	sd. sh. drlg.
Jerman, R. W., No. 1 Midway-Sunset, Kern Co.	17-31-23	4,048	sd. sh. drlg.
Pan American, No. 66 Midway-Sunset, Kern Co.	22-32-23	2,180	cmtd. 2,103
Berry & Ewing, No. 3 Midway-Sunset, Kern Co.	21-32-24	651	O.S. drlg.
Texas Co., No. 16 Midway-Sunset, Kern Co.	32-32-24	2,832	sd. sh. drlg.
North American, No. 3 Midway-Sunset, Kern Co.	2-32-24	4,099	sd. sh. drlg.
St. Helens Pet. Co., No. 1 Midway-Sunset, Kern Co.	22-32-24	3,425	will deepen
Associated Oil Co., No. 1 Tejon, Kern Co.	17-11-19	3,160	sd. sh. drlg.
Reserve Oil & Gas Co., No. 5 Tejon, Kern Co.	33-11-19	4,474	cleaning out
Ohio Oil Co., No. 2 Tejon, Kern Co.	21-11-19	1,364	sd. sh. drlg.
Western Gulf, No. 3 Cantua, Fresno Co.	3-17-15	8,527	cmtd. liner
Union Oil Co., No. 1 Lillis-Welsh, Fresno Co.	24-21-16	11,127	abandoning
K. N. D. A., No. 4-18-J Kettleman North, Fresno Co.	18-21-17	8,776	gr. sd. drlg.
K. N. D. A., No. 38-18-J Kettleman North, Fresno Co.	18-21-17	8,911	flow, 1,780 b.d.
K. N. D. A., No. 21-30-J Kettleman North, Fresno Co.	30-21-17	8,160	hd. sd. drlg.
K. N. D. A., No. 52-30-J Kettleman North, Fresno Co.	30-21-17	3,550	sd. sh. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sd. sh., sandy shale.
Sdtr., or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

K. N. D. A., No. 58-28-J Kettleman North, Fresno Co.	28-21-17	6,500	br. sh. drlg.
K. N. D. A., No. 63-28-J Kettleman North, Fresno Co.	28-21-17	7,680	hd. sd. drlg.
K. N. D. A., No. 81-24-H Kettleman North, Fresno Co.	24-21-16	8,895	flow. 625 b.d.
K. N. D. A., No. 83-24-H Kettleman North, Fresno Co.	24-21-16	8,871	gr. sd. drlg.
K. N. D. A., No. 52-34-J Kettleman North, Kings Co.	34-21-17	5,320	sd. sh. drlg.
K. N. D. A., No. 72-34-J Kettleman North, Kings Co.	34-21-17	7,175	reaming
K. N. D. A., No. 47-2-P Kettleman North, Kings Co.	2-22-17	7,085	fish. casing
K. N. D. A., No. 51-2-P Kettleman North, Kings Co.	2-22-17	7,755	flow. 675 b.d.
Standard Oil Co., No. 32-19-J Kettleman North, Fresno	19-21-17	8,751	hd. sd. drlg.
Standard Oil Co., No. 61-19-J Kettleman North, Fresno	19-21-17	8,890	cmtd.
Standard Oil Co., No. 72-19-J Kettleman North, Fresno	19-21-17	8,770	fish. D.P.
Standard Oil Co., No. 2-19-J Kettleman North, Fresno	19-21-17	5,774	sd. sh. drlg.
Standard Oil Co., No. 46-13-H Kettleman North, Fresno	13-21-16	7,300	br. sh. drlg.
Standard Oil Co., No. 54-1-U Kettleman North, Kings	1-23-18	9,675	redrlg. 8,125
Standard Oil Co., No. 48-35-J Kettleman North, Kings	35-21-17	7,400	hd. sd. drlg.
Standard Oil Co., No. 46-19-V Kettleman Middle, Kings	19-23-19	6,030	water zone
Kettleman View Oil Co., Well No. 1, Kings Co.	29-22-19	4,020	gr. sd. drlg.
Milheim Oil Corp., No. 1 Tulare, Kings Co.	20-22-22	5,815	fishing
Associated Oil Co., No. 1 Avenal, Kings Co.	33-23-17	2,930	testing
Foster, R. A., No. 1 Carriso, San Luis Obispo Co.	2-32-22	5,000	br. sh. drlg.
United Oil Co., No. 2 Panorama, San Luis Obispo Co.	2-32-21	1,751	sd. sh. drlg.
Union Oil Co., No. 1 Huasna, San Luis Obispo Co.	22-32-15	1,146	sd. sh. drlg.
Martin, J. D., No. 4 Pismo, San Luis Obispo Co.	5-32-13	3,002	sd. sh. drlg.
Martin, J. D., No. 5 Pismo, San Luis Obispo Co.	5-32-13	3,050	sd. sh. drlg.
Birch-Royer Oil Co., No. 1 Pismo, San Luis Obispo Co.	33-31-13	2,376	sd. sh. drlg.
Standard Oil Co., No. 3 McDonald Island, San Joaquin	31- 2-5	5,312	cmtd. 5,285
Shell Oil Co., No. 1 Pleyto, Monterey Co.	34-24-10	8,994	P.B. 8,750
Shell Oil Co., No 2 Pleyto, Monterey Co.	34-24-10	2,174	sd. sh. drlg.
Texas Co., No. 2 Eureka, Humboldt Co.	22- 3-1	4,428	cleaning out
Amerada Pet. Co., No. 2 Rio Vista, Solano Co.	26- 4-2	6,400	hd. sh. drlg.
Standard Oil Co., No. 2 Rio Vista, Solano Co.	27- 4-2	4,575	sd. sh. drlg.
Trico Oil & Gas Co., No. 1 Angiola, Tulare Co.	7-23-23	3,187	P.B. 1,800
Associated Oil Co., No. 1 Sargent, San Benito Co.	5-12-4	4,184	sd. sh. drlg.
Seaboard Oil Co., No. 1 Alameda, Alameda Co.	13- 3-3	4,062	hd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Marvin, J. L., No. 1 El Segundo, Los Angeles Co.	7- 3-14	7,521	will abdn.
Richfield Oil Co., No. 1 El Segundo, Los Angeles Co.	18- 3-14	4,771	sd. sh. drlg.
Signal Finance, No. 1 Hawthorne, Los Angeles Co.	10- 3-14	8,970	sd. sh. drlg.
Marl Oil Co., No. 1 Moneta, Los Angeles Co.	35- 3-14	7,165	reaming
Listle, J. L., No. 1 Moneta, Los Angeles Co.	33- 3-14	7,352	cleaning out
C. C. M. Oil Co., No. 2 Torrance, Los Angeles Co.	31- 3-14	3,916	sd. sh. drlg.
C. C. M. Oil Co., No. 3 Torrance, Los Angeles Co.	9- 4-14	3,811	redrlg. 3,200
Shepard, Harry, No. 1 Torrance, Los Angeles Co.	6- 4-14	722	cmtd. 722
M. W. Pet. Co., No. 1 Torrance, Los Angeles Co.	6- 4-14	3,515	O.S. drlg.
Clark, T. R., No. 1 Torrance, Los Angeles Co.	31- 3-14	4,198	O.S. drlg.
Walsh & Co., No. 1 Torrance, Los Angeles Co.	6- 4-14	1,951	sd. sh. drlg.
Shell Oil Co., No. 1 Kranz Torrance, Los Angeles Co.	32- 3-14	3,720	rig. to pump
Collier, P. V., No. 1 Torrance, Los Angeles Co.	16- 4-14	3,781	to deepen
Emerald Oil Co., No. 1 Redondo, Los Angeles Co.	8- 4-14	3,791	idle
Terry, George, No. 1 Redondo, Los Angeles Co.	8- 4-14	4,480	br. sh. drlg.
Standard Oil Co., No. 80 Inglewood, Los Angeles Co.	8- 2-14	3,800	sd. sh. drlg.
Standard Oil Co., No. 24 Inglewood Rubel, Los Angeles	8- 2-14	2,673	sd. sh. drlg.
Crude Oil Drlg. Co., No. 1 Gardena, Los Angeles Co.	31- 3-13	4,898	bl. sh. drlg.
West American, No. 1 Gardena, Los Angeles Co.	5- 4-13	5,752	sd. sh. drlg.
Shell Oil Co., No. 84 Dominguez Reyes, Los Angeles	33- 3-13	6,830	O.S. drlg.
Union Oil, No. 8 Dominguez Carson, Los Angeles Co.	33- 3-13	7,306	flow. 350 b.d.
Union Oil, No. 38 Dominguez Callender, Los Angeles	33- 3-13	7,393	P.B. 6,898
Union Oil, No. 47 Dominguez Callender, Los Angeles	33- 3-13	8,567	sd. sh. drlg.
Union Oil, No. 50 Dominguez Callender, Los Angeles	33- 3-13	3,953	reemtd. 3,943
Continental Oil Co., No. 39 Seal Beach, Los Angeles	11- 5-12	6,445	P.B. 6,195
Eastern Oil Co., No. 1 Del Rey, Los Angeles Co.	22- 2-15	7,422	P.B. 7,200
Sharby Oil Co., No. 1 Del Rey, Los Angeles Co.	22- 2-15	1,755	sd. sh. drlg.
Del Rey Drlg. Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	6,538	rig to pump
Superior Oil Co., No. 1 Del Rey, Los Angeles Co.	25- 2-15	4,281	sd. sh. drlg.
Yant Pet. Corp., No. 1 Newhall, Los Angeles Co.	1- 3-16	2,816	fishing
Holbrook Pet. Co., No. 1 Newhall, Los Angeles Co.	28- 4-16	3,352	fish. D.P.
Barnsdall Oil Co., No. 1 Newhall, Los Angeles Co.	26- 4-17	3,254	sd. sh. drlg.
Sunset Oil Co., No. 1 Wilmington, Los Angeles Co.	28- 4-13	3,640	idle
Pan American, No. 1 Wilmington, Los Angeles Co.	20- 4-13	5,952	sd. sh. drlg.
Bankline Oil Co., No. 1 Wilmington, Los Angeles Co.	34- 4-13	4,337	P.B. 3,510
General Pet. Corp, No. 1 Wilmington, Los Angeles Co.	4- 5-13	6,573	sd. sh. drlg.
Monarch Oil Corp., No. 1 Topango Canyon, Los Angeles	5- 1-16	1,568	sd. sh. drlg.
Woodward, J. A., No. 1 Montebello, Los Angeles	4- 2-11	4,959	P.B. 3,100
Bush Oil Co., No. 1 Montebello, Los Angeles Co.	4- 2-11	3,461	dry; abd.
Standard Oil Co., No. 87 Montebello, Los Angeles Co.	1- 2-12	2,821	bailing
Universal Consd., No. 8 Montebello, Los Angeles Co.	5- 2-11	7,471	recmtd. 5,538
Universal Consd., No. 9 Montebello, Los Angeles Co.	5- 2-11	5,951	P.B. 5,900
Universal Consd., No. 10 Montebello, Los Angeles Co.	5- 2-11	5,897	reaming
Universal-Richfield, No. 1-J Montebello, Los Angeles	6- 2-11	4,200	sd. sh. drlg.
Republic Petroleum Co., No. 1 Montebello, Los Angeles	6- 2-11	6,070	will abdn.
Richfield Oil Co., No. 2 Montebello, Los Angeles Co.	5- 2-11	7,560	P.B. 6,075
St. Helens Pet. Co., No. 8 Montebello, Los Angeles Co.	5- 2-11	5,060	may abdn.
St. Helens Pet. Co., No. 19 Montebello, Los Angeles Co.	2- 2-12	3,796	sd. sh. drlg.
St. Helens Pet. Co., No. 20 Montebello, Los Angeles Co.	2- 2-12	3,495	sd. sh. drlg.
St. Helens Pet. Co., No. 21 Montebello, Los Angeles Co.	2- 2-12	3,728	pump. 50 b.d.
Texas Co., No. 14 Montebello, Los Angeles Co.	6- 2-11	5,845	flow. 850 b.d.
Texas Co., No. 15 Montebello, Los Angeles Co.	6- 2-11	5,388	cmtd. 5,388
Hathaway, No. 3 Fulton, Santa Fe Sprgs., Los Angeles	6- 3-11	4,130	cleaning out
General Pet., No. 46-D Santa Fe Springs, Los Angeles	6- 3-11	4,575	fish. bailer
Ring Oil Co., No. 4 Santa Fe Springs, Los Angeles	5- 3-11	4,666	bailing
Union Oil Co., No. 31 Santa Fe Springs, Los Angeles	6- 3-11	4,071	cmtd. 4,071
Union Oil Co., No. 34 Santa Fe Springs, Los Angeles	6- 3-11	4,490	sd. sh. drlg.
Union Oil Co., No. 35 Santa Fe Springs, Los Angeles	6- 3-11	865	cmtd. 865
Union Oil Co., No. 36 Santa Fe Springs, Los Angeles	6- 3-11	390	sd. sh. drlg.
Union Oil Co., No. 98 Santa Fe Springs, Los Angeles	6- 3-11	870	cmtd. 869
Union Oil Co., No. 100 Santa Fe Springs, Los Angeles	6- 3-11	4,161	fish. D.P.
Union Oil Co., No. 101 Santa Fe Springs, Los Angeles	6- 3-11	2,761	sd. sh. drlg.
Union Oil Co., No. 102 Santa Fe Springs, Los Angeles	6- 3-11	4,300	cmtd. 4,300
Vanda Petroleum, No. 1 Santa Fe Springs, Los Angeles	6- 3-11	7,960	P.B. 6,195
Shannon, Charles, No. 1 Covina, Los Angeles Co.	7- 1-9	121	sd. sh. drlg.
Bernstein, M. E., No. 1 Artesia, Los Angeles Co.	25- 3-12	5,910	sd. sh. drlg.
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36- 5-5	2,985	sd. sh. drlg.
Associated Oil Co., No. 4 Huntington, Orange Co.	34- 5-11	4,050	rigging up
Associated Oil Co., No. 8 Huntington, Orange Co.	34- 5-11	4,630	cleaning out
Associated Oil Co., No. 2 Huntington, Orange Co.	34- 5-11	4,742	C.P. 3,960
Pac-American Pet. Co., No. 3 Huntington, Orange Co.	34- 5-11	3,999	fish. casing
Standard Oil Co., No. 12 Huntington, Orange Co.	12- 6-11	2,900	wet
Lucky Strike Oil Co., No. 7 Huntington, Orange Co.	2- 6-11	2,870	sd. sh. drlg.
Huntington Signal Oil Co., No. 1 Huntington, Orange	34- 5-11	4,000	cmtd. 3,710
Shell Oil Co., No. 19 Brea, Orange Co.	2- 3-10	4,883	O.S. drlg.
Standard Oil Co., No. 2-5 Coyote, Orange Co.	22- 3-10	3,790	will deepen
Holly Oil Co., No. 1 East Coyote, Orange Co.	20- 3-9	2,560	will deepen
West American Oil Co., No. 1 East Coyote, Orange Co.	24- 3-10	6,430	P.B. 5,850
Continental Oil Co., No. 1 East Coyote, Orange Co.	20- 3-9	2,720	flow. O.&W.
Hancock Oil Co., No. 1 East Coyote, Orange Co.	17- 3-9	3,278	P.B. 2,850
West Coast Ref. Co., No. 1 Santa Ana, Orange Co.	25- 3-9	821	hd. sd. drlg.
Union Oil Co., No. 29 Chapman Richfield, Orange Co.	30- 3-9	7,280	redrlg. 7,105
Union Oil Co., No. 30 Chapman Richfield, Orange Co.	30- 3-9	4,400	pump. 208 b.d.
Union Oil Co., No. 33 Chapman Richfield, Orange Co.	30- 3-9	4,442	swabbing
Union Oil Co., No. 36 Chapman Richfield, Orange Co.	30- 3-9	3,594	completing
Calif. Eastern Oil Co., No. 1 Placentia, Orange Co.	31- 3-9	4,786	fish. D.P.
Melbourne Pet. Co., Well No. 1, San Bernardino Co.	12- 3-8	2,233	cleaning out
Equitable Pet. Co., No. 1 Wildcat, San Bernardino Co.	11-10-5	2,812	hd. sd. drlg.

KANSAS

Week Ending October 3 (Descriptions are East unless marked otherwise)

Barber County

Sinclair Prairie Oil Co. No. 1 Gentry, NE cor. sec. 1-33-15w. Miss. 4,802 ft.; cd. to 4,861 ft. T.D. Schlumberger test.

Barton County

Armer & Vernon O. & G. Co. No. 1 Ainsworth, NE NE SE sec. 33-16-13w. M.I.M.

F. E. Bailey et al No. 1 Hammeke, NE NE SW sec. 12-18-12w. Set 20-in. pipe 40 ft.; S.D. 315 ft.

Freehorn et al No. 1 Sooy, NW NW NE sec. 27-18-12w. Cellar.

Missouri Valley Oil & Gas Co. No. 1 Peach, SE cor. sec. 24-16-14w. M.I.M.

C. L. Price No. 1 Deutsch, NW NW NE sec. 16-16-13w. Drlg. 2,385 ft.

G. H. Rose and W. H. Lant No. 1 Redetzke, NE NW NW sec. 1-16-11w. Set 5-in. csg. 3,200 ft.; Sil. 3,326-30 ft. Est. 4 B.O.P.H.; U.R. at 3,294 ft.

Yarnell & Carlson No. 1 Roth, NE cor. sec. 35-18-12w. Drlg. 2,605 ft.

Butler County

Hutchinson Oil & Gas Co. et al No. 1-A Westfall, SE SW SE sec. 13-27-3. Drlg. 595 ft.

Simpson Oil Co. No. 1 Dahlem, SW cor. sec. 11-26-6. R.U.

Chase County

Propp et al No. 1 Fromm, SE cor. sec. 29-18-9e. 10-in. csg. 2,118 ft.; C.O.

Clark County

Olson & Watchorn No. 1 Morrison, C SE SW sec. 17-32-21w. Drlg. 5,780 ft.

Cowley County

Home Natural Co. & McNish No. 2 Werner, SE SE SW sec. 31-32-6. Drlg. 278 ft.

Decatur County

Winkler & Koch No. 1 Vessey, C NW SE sec. 26-3-26w. R.U.R.

Edwards County

Skelly Oil Co. et al No. 1 Kipp, C SE SE NE sec. 27-25-14w. Cellar.

Stanolind O. & G. Co. et al No. 1 Donovan, C SE SE sec. 14-26-18w. Fsg. 4,570 ft.; will skid rig.

Ellis County

Bradley Oil Co. et al No. 1 Penney-Wann, SE cor. sec. 13-15-20w. Set 5-in. csg. 3,631 ft.; sand 3,653-57 ft.; 600 ft. O.I.H. in 30 min.

Bridgeport Mch. Co. No. 1 Ubert, NE NE NW sec. 12-13-18w. Sil. 3,598 ft. Pay 3,630-37 ft.; swb. 24 bbls. in 24 hrs.; wtr. at 3,556 ft.; T.D. 3,707 ft.; S.D.O.

Jas. Brouk et al No. 1 Jacobs, NW NW SE sec. 31-15-16w. Drlg. 385 ft.

Empire O. & R. Co. No. 1 Samuelson, NE NE SE sec. 31-11-16w. Cong. 3,605-40 ft.; T.D.; U.R.

Champlin Refining Co. No. 1 Hadley, SE SW NE sec. 30-11-17w. Topeka 3,085 ft.; Lansing, 3,389 ft.; T.D. 3,487 ft.; U.R.

Glick & Morrow No. 1 Staah, SW SW SE sec. 6-13-17w. Drlg. 3,345 ft.

Frank Hamilton et al No. 1 Sack, NW NW SE sec. 26-13-19w. 8-in. 1,218 ft.; Topeka 3,174 ft.; Oswald 3,450 ft.; S.O. 3,543-50 ft.; set 5-in. 3,590 ft.; drlg. 3,600 ft.

Jones & Shelbourne No. 1 Gunther, SE SE SW sec. 9-11-19w. Sil. 3,646 ft.; U.R. 6-in. csg.

Kansas Dev. Corp. No. 1 Haller, SE SE NW sec. 10-11-18w. Anhydrite 1,190 ft.; Topeka 2,915 ft. (cor.); T.D. 3,050 ft.; acidized; potential prod. 531 bbls. oil in 24 hrs.

Ted Kors et al No. 1 Koblitz, SE SW NW sec. 23-12-18w. Andy. 1,410 ft.; U.R. 12-in. at 1,418 ft.

Lario O. & G. Co. et al No. 1 Cress, NE cor. sec. 13-11-17w. S.D. 346 ft.

Lario O. & G. Co. No. 1 Marshall, NW SE NE sec. 36-11-18w. Anhy. 1,347 ft.; drlg. 2,245 ft.

Murphy Oil Co. No. 1 Wiesner, SE SE SW sec. 12-14-19w. R.U.

Simar Oil Co. et al No. 1 Leiker, NW NW SE sec. 12-15-18w. Set 6-in. csg. 3,326 ft.; T.D. 3,327 ft.; S.D.

Taylor et al No. 1 Emery, NE NE NE sec. 23-14-18w. Set 12-in. csg. 793 ft.; S.D.

Winkler & Koch No. 1 Jensen, SW SW NE sec. 3-13-18w. Rig.

Ralph Wixson et al No. 1 Gorham Estate, NW NW SW sec. 35-15-16w. Drlg. 2,620 ft.

Wolf Creek Oil Co. et al No. 1 Polifka, SW SW NE sec. 24-13-18w. Set 8-in. at 2,961 ft.; drlg. 3,262 ft.

Graham County

Sam Murphy and J. S. Alcorn No. 1 Wamhoff, C NW sec. 27-10-22w. Setting surface pipe; T.D. 80 ft.

Noah & Young No. 1 Hills, NW SE SE sec. 19-10-21w. Anhydrite 1,770 ft.; drlg. 1,960 ft.

Grant County

Columbian Fuel Co. No. 1 Gray, C SE sec. 3-29-35w. Set 8-in. csg. 2,500 ft.; 3,000,000 ft. gas, 2,808 ft., T.D.; shot.

Greenwood County

Guy Scott et al No. 1 Pedroja, SE NE SE sec. 6-26-10. Peru sd. 1,675-1,720 ft.; S.O.; fsg. 2,130 ft.

Harvey County

Harburney Oil Co. No. 1 Schrag, NW NW SE sec. 24-22-3w. Set 10-in. csg. 3,062 ft.; T.D. 3,110 ft.; S.D.; S.O. and G.

Kearney County

J. L. Murphy No. 1 Campbell, NW NW SW sec. 32-25-35w. M.I.M.

Kingman County

W. C. McBride, Inc., No. 2-A Wooldridge, SW NE SE sec. 16-27-7w. Chat 3,860 ft.; T.D. 3,898 ft.; swb. 2½ bbls. oil and 23 bbls. wtr. in 2 hrs.; S.D.O.

D. R. Lauck et al No. 1 Skilling, C E½ E½ SW sec. 3-27-8w. O.W.D.D.; drlg. 4,583 ft.

Lincoln County

Graham et al No. 1 Smiley, NE NW NW sec. 26-10-9w. R.U.R.

Marion County

Empire Oil & Ref. Co. No. 1 Schmidt, NW NW SE sec. 31-20-2. Viola 3,078 ft.; 2,600 ft. W.I.H. at 3,122 ft.; T.D. 3,186 ft; D.&A.

Western Kansas Oil & Refining Co. et al No. 1 Hauser, SW cor. sec. 19-19-4. M.I.M.

Ness County

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. T.D. 1,640 ft; setting 10-in. csg.

Sayre Oil Co. et al No. 1 Ryersee, C NE SE sec. 34-18-21w. Drlg. 4,050 ft.

Pratt County

H. V. Elwell et al No. 1 Fay, NW NW SE sec. 15-27-14w. Drlg. 4,295 ft.

Indian Territory Illum. Oil Co. and Olson Drlg. Co. No. 1 Bolt, C NW NE sec. 5-29-11w. Drlg. 3,984 ft.

Reno County

Foraker et al No. 1 Hiett, SE SW NE sec. 34-24-4w. Set 5-in. lnr. 3,385 ft.; Chat 3,424 ft. (corrected); S.D. 3,540 ft.

Maxwell Oil & Gas Co. No. 1 Clayton, SE SE NW sec. 23-25-7w. Loc.

Page et al No. 1 Mueller, C S½ SW NE sec. 25-24-5w. Drlg. 3,739 ft.

Fred Phillips No. 1 Bay, SW SW SW sec. 7-23-8w. Chat 3,703 ft.; cored 3,705-08 ft.; S.S.G.; set 7-in. csg. 3,685 ft.; W.O.C.

Pryor & Lockhart et al No. 1 Kerr, C NW sec. 23-23-8w. K.C. L. 3,150 ft.; T.D. 3,593 ft.; to set csg.

Fred Rust No. 1 Schumacher, SE SE SW sec. 29-22-8w. Viola 3,918-20 ft.; cored to 4,100 ft.; coring ahead.

Rice County

Allison & Fitzwilliam et al No. 1 Feby. NW SW NW sec. 17-19-7w. 12-in. csg. 1,111 ft.; T.D. 2,270 ft.; S.D.

Buckley No. 1 Bailey, SW SW NW sec 19-20-6w. Rig.

Charles Petroleum Corp. No. 1 Speck, NW NW SE sec. 29-20-8w. T.D. 1,863 ft.; C.O.

Gulf Oil Corp. No. 1 Steckel, SW cor. sec. 30-19-10w. Set 10-in. csg. 150 ft.

Sage et al No. 1 Patton, SW cor. sec. 5-21-7. Cong. 3,329-37 ft.; H.F.O. and slopping over in 3 hrs.; S.I.

Shell Pet. Corp. No. 1 Gordon, C W half W half NE sec. 21-21-10w. Siliceous 3,435 ft.; cg.

Shell Pet. Corp. No. 1 Maughlin, NE NW SE sec. 11-20-8w. Siliceous 3,235-38 ft.; 36,500,000 ft. of gas at 3,260 ft.; acidized; no gas; T.A.

John Stark et al No. 1 Doran, NE NE SE sec. 13-19-10w. Sil. 3,291-3,311 ft.; 2,200 ft. O.I.H.; to acid.

W. E. Witt et al No. 1 Wright, NW NW SE sec. 26-19-9w. R.U.

Rooks County

Buckner & Schoff No. 1 McConnel, NE cor. sec. 34-6s-18w. Rig.

Empire Oil & Ref. Co. No. 1 Ham, SW NW NW sec. 24-8-19w. M.I.T.

L. C. D. Drlg. Co. et al No. 1 Westhusin C NE SE sec. 11-9-17w. 8-in. 2,685 ft.; T.D. 2,690 ft.; C.O.

Lester & Dean No. 1 Methens, SE SE NE sec. 29-10-20w. Topeka 3,250 ft.; fsg. 3,366 ft.

J. A. Shoemake No. 1 Stebbins, NE NE SW sec. 26-7-17w. T.D. 3,591 ft.; P.B. to 2,630 ft.; drld. to 2,663 ft.; acid.; P. 135 bbls. oil and 115 bbls. wtr in 15 hrs.; to deepen.

Rush County

C. L. Sheedy No. 1 Bison, SW cor. sec. 35-16-17w. Set 15-in. csg. 515 ft.; drlg. 1,070 ft.

Russell County

Arner et al No. 1 Maier, NE NW NE sec. 20-15-14w. Set 6-in. csg. 3,040 ft.; Sil. 3,295-96 ft. T.D.; H.F.W. 3,317 ft.; D.&A.

Braden & McClure No. 1 Herbel, NE NE NW sec. 35-14-14w. Gorham sd. 3,165-68 ft.; set 5-in. 3,164 ft.; Pot. 220 bbls. oil.

Coralena Oil Co. No. 1 L. A. Seliens, NW cor. sec. 17-15-13w. Topeka L. 2,620 ft.; T.D. 2,878 ft.; 2,350 ft. O.I.H.; to acid.

El Dorado Ref. Co. No. 1 Scott, NW NW NE sec. 17-13-13w. S.D. 835 ft.

R. C. Tarrant No. 1 Williamson, SE SE NW sec. 9-14 14w. Tarkio L. 2,515 ft.; T.D. 2,550 ft.; swabbed 5 B.P.H. and showing of wtr.; acidized with 1,000 gals.; made potential of 243 bbls. of oil.

Winkler & Koch No. 1 McAllister, NE NE SE sec. 9-12-13w. Anhy. 811 ft.; drlg. 2,200 ft.

Saline County

Brouk et al No. 1 Othelander, NE NW SE sec. 10-16-3w. R.U.

Ryan Consolidated Co. & Archer No. 1 Norton, NE cor. sec. 32-14-2w. Set 8-in. 2,917 ft.; T.D. 3,415 ft.; set 6-in. csg.; acidized. P. 300 bbls. water in 10 hrs.; S.O.; recemented 6-in.; no shutoff.

Sedgwick County

D. R. Lauck No. 1 McLean, SW SW SE sec. 1-27-1w. Siliceous 3,613 ft.; wtr.

3,755-68 ft.; T.D. 4,125 ft.; pulled 5-in. csg.; S.R. 6-in. csg.

R. J. Wallace et al No. 1 Scheer, SW cor sec. 22-27-3w. S.O. 3,145 ft.; base K.C. L. 3,265 ft.; cemented back to 3,016 ft.; W.O.C.

Smith County

Helmerich & Payne No. 1 Meyer, NE NE SW sec. 10-5-11w. Rotary rig.

Stafford County

Indian Terr. Illum. Oil Co. and Empire O. & R. Co. No. 1 Mellies, C N½ N¼ NE sec. 6-22-11w. U.R. 8-in. csg. 3,000 ft.

Skelly Oil Co. et al No. 1 Kipp, SE SE NE sec. 27-25-14w. 8-in. 3,691 ft.; R.U.S.T.

C. E. Skiles No. 1 Leidigh, NW NW SW sec. 21-22-11w. Anhy. 563 ft. 12-in. csg., 567 ft.; drlg. 1,350 ft.

Sumner County

S. J. Buffington No. 1 Payne, C SW NE sec. 10-35-2e. Sand 1,544-45 ft., T.D.; est. 1,000,000 ft. gas; set 5-in. csg.

Empire O. & R. Co. No. 1 Hoffman, NW NW SW sec. 27-34-1e. R.O.G.

D. L. Husted et al No. 1 Evers, SE SE NE sec. 27-31-2. Drlg. 400 ft.

Matthews & Derrington No. 1 Berry, NW NW SE sec. 14-35-1. Big L. 3,712 ft.; Simpson 3,753 ft.; S.D. 3,780 ft.

W. C. McBride, Inc. & Olson Drilling Co. No. 1 Kinlund, NE NW NE sec. 24-34-1. Pits.

Pryor & Lockhart No. 1 McCowen, NE NE SW sec. 18-32-1w. Wilcox 4,151-84 ft.; drld. ahead.

Rose Spring Drlg. Co. et al No. 1-A Rutter, C NW NW sec. 21-33-2e. Spudded

Texas Co. No. 1 Reed, NE SE SE sec. 11-31-1w. Drlg. 4,027 ft.

Trego County

J. J. Hall et al No. 1 Deines, SE SE SE sec. 12-13-24w. Set 6-in. csg. 4,409 ft.; Miss. 4,410 ft.; H.F.W. 4,470-80 ft.; fsg. 4,500 ft.

R. B. McNeely et al No. 1 Lemke, NW NW SW sec. 7-11-22w. T.D. 3,671 ft.; will run 5-in. csg.

G. M. Piggott, Inc. et al No. 1 Burkett, C SW sec. 15-11-22w. Set 6-in. csg. 3,596 ft.; T.D. 3,613 ft.; S.D. for fuel.

York State Oil Corp. No. 1 Gugler, SW cor. sec. 36-12-21w. T.D. 3,421 ft.; set 8-in csg. at 3,193 ft; drlg. cement.

Woodson County

N. C. Dunn No. 1 Dawson, C NW NE sec. 27-26-13. L. 1,505 ft.; T.D. 1,527 ft.; P.B. 1,200 ft.; H.F.O.; no test.

Holmes et al No. 1 Holmes, SE NE NE sec. 25-25-14e. Drlg. 615 ft.

Ladd et al No. 1 Lauber, NW cor. sec. 4-25-14e. Drlg. 835 ft.

C. L. Sheedy et al No. 1 Fuhlhage, NE NW SW sec. 27-25-14. Set 6-in. csg 1,431 ft.

Texas County

Allison & Barnhill No. 1 Bingley, SE SE NE sec. 30-2n-18. (Cimmaron Meridian) Sand 1,037-47 ft.; and 1,100-1,123 ft.; U.R. csg.

OKLAHOMA

Week Ending October 3

NORTHERN OKLAHOMA

Beckham County

Mid-American Oil Co. No. 1 Biscoe, SW SW SW sec. 28-8-22w. Drlg. 890 ft.

Caddo County

Wasteka Oil Co. No. 1 Griffin, SW SE NE sec. 27-6-10w. T.D. 6,570 ft.; P.B. to 5,400 ft.; S.D.

Cleveland County

Hall-Briscoe, Inc., No. 1 Fant, SW SW NE sec. 27-10-2w. S.D. at 7,511 ft

H. R. Hollenbeck No. 1 Stinson, NW NW NE sec. 17-9-2w. Rig.

Coal County

Carter Oil Co. et al No. 1 Warne, NE NE NW sec. 31-3-9. Atoka 1,870 ft.; drlg. 2,810 ft.

Continental Oil Co. No. 1 Breedlove, NW SW SW sec. 24-1-8. Coring 2,510-2,611 ft., sandy shale.

Continental Oil Co. No. 1 Daniels, SW NE SW sec. 27-1-9. R.U.R.

Continental Oil Co. No. 1 King, NE SW NE sec. 26-1-8. Coring, 4,112-22 ft.

Continental Oil Co. No. 1 W. Kirby, SW SE SW sec. 23-1-8. 9-in. 1,513 ft.; drlg. 1,610 ft.

H. W. Lee et al No. 1 Harton, C NE NE NE sec. 9-6-13w. T.D. 2,001 ft.; S.D.

M. C. Mitchell No. 1 Quiett, NE NW SW sec. 35-1-8. Wapanucka 1,550 ft.; T.D. 1,900 ft.; shot collapsed 38 ft. of pipe; tools stuck 1,551 ft.; swedged out.; S.D.

Sinclair Prairie Oil Co. No. 1 Culver, NE NE SW sec. 16-1-8. Cored 5,387-5,491 ft.; cg. ahead.

Garfield County

Herndon Drlg. Co. et al, No. 1 Branson, SW SW SE sec. 23-24-3w. Drlg. 4,780 ft.

Ellison & Hammond No. 1 Selby, C SE NW sec. 24-2-3w. M.I.M.

B. F. Lundy No. 1 Prince, NE NE SE sec 21-1-2w. T.D. 2,552 ft.; S.D.

C. A. Luttrell et al No. 1 Howell, NW SE NW sec. 34-1-1. T.D. 160 ft.; S.D.

Ohio Oil Co. No. 1 Smythe, NE NE SW sec. 23-22-4w. (Wilcox sd. test); moving in rotary; cd. oily sds. and sh. 3,532-58 ft.

Garvin County

Ellison & Hammond No. 1 Selby, C SE NW sec. 24-2n-3w. R.U.R.

Pure Oil Co. No. 1 Isaac, SE cor. sec. 6-2-1. Rig corners.

Tide Water Oil Co. et al No. 1 Sturtevant, NE NE NW sec. 28-4-1e. S.O. 3,030-52 ft.; drlg. 3,880 ft.

Grady County

John Graham et al No. 1 Castleberry SW SE NW sec. 8-5-7w. Sd. 1,900-06 ft.; showing oil and gas; bailed dry; T.D. 1,909 ft.; D.&A.

Ray Stevens No. 1 Mays, NE cor. sec. 1-3-8w. Drlg. 5,836 ft.

Tide Water Oil Co. No. 1 Sturtevant, NE cor. NW sec. 28-4-1e. Loc.

Hughes County

McAdams & Barnes No. 1 Koch, SW NE NE sec. 1-9-10. T.D 3,835 ft.; P.B. to 2,600 ft.; whipstocking 2,900 ft.

McAdams & Barnes No. 1 Long, SE NE NW sec. 29-9-9. Drlg. 3,130 ft.

Mid-West Oil Co. No. 1 Turner-Lucas, C SE NW sec. 13-9-9. Rig.

Sinclair Prairie Oil Co. et al No. 1 Wilkly, SW cor. sec. 23-9-8. Calvin 1,505 ft.; Cromwell 3,508 ft.; T.D. 3,549 ft.

Sivalls et al No. 1 Montgomery, NW SW NW sec. 7-9-9. Crom. 3,472-94 ft.; T.D. 3,540 ft.

Southern Oil Co. No. 1 Buck, C NW SW SW sec. 21-8-10. R.U.S.T.

Kay County

W. O. Allen No. 1 Fulton, SE cor. sec. 18-27-4. Sd. 2,186-2,220 ft.; Oswego 2,985 ft.; drlg. 3,186 ft.

Denver Prod. & Ref. Co. No. 1 School, SE NW NE sec 13-26-1w. Wilcox 4,123 ft.; T.D. 4,141 ft.; P.B. to test Oswego; bailed to bottom; S.S.O.&G.; 500 ft. W.I.H.; S.D.

Max Kelley No. 1 Johns, NW NW NW sec. 35-27-4. Drlg. 910 ft.

Robert Wilson et al No. 1 Dickerson, NE NE SW sec. 20-29-1w. Stalnaker sand 2,550-2,620 ft.; Big lime 3,180 ft.; Layton 2,974 ft.; drlg. 3,277 ft.

Kiowa County

Argus Pet. Co. No. 1 Osbourne, NW cor. NE sec. 9-7-16w. T.D. 795 ft.; S.D.

Burns & Moore No. 1 Block, NW NE SW sec. 31-6-16w. S.D. 50 ft.

R. O. Houlbelt No. 1 Pfenning, SE NW SE sec. 35-7-17w. Machine.

Lykins et al No. 1-A Aetna Life, SE cor. sec. 8-5-16w. T.D. 530 ft.; S.D.

Pendleton & Vaughn No. 2 R. E. Hobb, C E½ NW SW sec. 7-6-16w. T.D. 425 ft.; W.O.C.; est. 2-bbl. pumper; S.D.

Pendleton & Vaughn No. 3 Smart, SE NW SE sec. 12-6-17w. T.D. 350 ft.; S.D.

Rush C. Roberts No. 1 Funkhouser, SE cor. NW NW sec. 25-7-17w. Drlg. 125 ft.

Travis & Scott No. 1 Doyle, NE SE SW sec. 21-5-17w. T.D. 937 ft.; S.D.

J. M. Young No. 1 Cooke, NE NE NW sec. 33-2-16w. Mch.

Le Flore County

McCraw et al No. 1 Tidwell, C NW SE sec. 17-3-22. Pull 10-in. csg.; T.D. 1,900 ft.; set 10-in. csg.; S.D. for wtr.

Lincoln County

Skelly Oil Co. No. 1 Sporn, NW NE SW sec. 21-17-3. T.D. 4,550 ft.; R.U.S.T.

Logan County

Helmerich & Payne et al No. 1 Hasler NW NW SE sec. 14-16-4w. Drlg. 900 ft.

McIntosh County

Stanolind Oil & Gas Co. et al No. 1 Tiger NW NW SW sec. 13-9-15. Drlg. 1,056 ft.

Murray County

Ellison & Hammond No. 1 Selby, C SE NW sec. 24-2-3w. Moving in tools.

Hornsby & Jones No. 1 Sadler, NE NE NW sec. 20-1n-2e. T.D. 2,674 ft.; D.&A.

Power Oil Co. No. 1, C SW NE sec. 10-1s-2e. Set 10-in. csg. 252 ft.; drlg. 1,710 ft.

Osage County

Chavalier & Simon No. 1 Osage, SE cor sec. 24-23-9. R.U. and S.D. for wtr.

Pittsburg County

Okla. Dist. Oil Co. No. 1 Beeler, NE NE SW sec. 7-7-14. T.D. 2,904 ft.; drill pipe in hole; cmtd. crevice with 300 sacks; fsg. for drill pipe.

Pontotoc County

H. H. Diamond No. 1 fee, SE cor. sec. 30-5-8. Cellar and pits.

Sands Pet. Co. No. 1 Harvey, SE cor. sec. 21-3-5. Drlg. 282 ft.

Pottawatomie County

Carter Oil Co. No. 1 Warne, NE NE NW sec. 31-3-9. Digging cellar.

J. L. Shaw No. 1 Illinois Life, NW SE NW sec. 1-4-5. Drlg. 1,590 ft.

Seminole County

Amerada Pet. Co. No. 1 Yarhola, NE NW NW sec. 36-10-7. Drlg. 1,160 ft.

Felmlee & Nichaelson No. 1 Belford, SE NW NE sec. 15-9-8. Sd. 1,460-1,505 ft.; S.O.&G.; S.D. 1,680 ft.

H. E. Kennedy No. 1 Bowlegs, NW NW SE sec. 3-8-7. Loc.

SOUTHERN OKLAHOMA

Atoka County

A. J. Sanders No. 3 Redden, SE SW SW sec. 19-1n-5e. Drlg. 655 ft.

Carter County

Carter Oil Co. et al No. 1 Leon Voorhees, C SE SW sec. 34-5s-2w. T.D. 8,625 ft.; lost circulation.

W. E. Hammond No. 1 J. Lile, SW cor. SE SE sec. 8-5s-1e. T.D. 570 ft.; 10-in. csg. 544 ft. Machine moved out.

Texas Co. et al No. 1-B Cathey, SE NE NE sec. 6-5s-1w. O.W.D.D.; sd. 4,354-55 ft.; swbd. 330 bbls. in 15 hrs.; T.D. 4,559 ft.; P.B. to 4,410 ft. Acidized; pumped 45 bbls. on Sept. 23; pulled rods and tubing; S.D.

Cotton County

English Drlg. Co. No. 1 Wilson, NW NW SE sec. 7-4s-7w. Tools moved out; T.D. 1,514 ft.

Phillips Pet. Co. No. 1 Warren, C NE NE SE sec. 1-5s-13w. Water 1,940-60 ft.; drlg. 2,036 ft.

Harmon County

Lloalko Trust, Ltd., No. 1 Crosnoe, SE SE SW sec. 14-3n-25w. T.D. 2,946 ft.; lost circ.

Jackson County

C. P. Burnham No. 1 Oliver, NW NW SE sec. 26-1-20w. T.D. 2,368 ft.; tools moved out.

Jefferson County

A. T. Campbell No. 1 Trout, SE NE NE sec. 6-8s-7w. Moving in machine; T.D. 2,212 ft.; S.D. for crew.

Mid-Continental Oil Co. No. 1 Reid, C SW NW sec. 32-6s-4w. R.U.R.

Pearson et al No. 1 Douthitt, NE cor. sec. 24-6s-9w. T.D. 3,670 ft.; S.D. for fuel.

Twin State Oil Co. No. 1 Brown & Majors, SW SE NW sec. 21-5s-6w. Loc.

Johnston County

Equitable O. & G. Co. No. 1 Bellaey, NE SW sec. 12-2s-4e. Arbuckle L. 1,552 ft.; drlg. 1,938 ft. in L.

Love County

Amerada Pet. Corp. No. 1-A Westheimer & Daube, SW SE SW sec. 27-6s-2e. T.D. 7,363 ft.; P.B. 2,970 ft.; perforated csg. at 1,539-99 ft. and 2,095-2,115 ft.; cmtd. perf.; flwd. 22 bbls. in 24 hrs. and "went dead"; S.D.O. Aug. 4.

W. H. Riddle et al No. 1 Johnson, C SW SE cor. sec. 20-8s-2w. T.D. 4,009 ft.; to deepen.

Sinclair Prairie Oil Co. No. 1 Stockton, SE SE SW sec. 26-6s-2w. T.D. 8,583 ft.; P.B. to 8,133 ft.; bailing hole, to cut pipe.

Marshall County

Helmrich & Payne No. 1 Taliaferro, NW SE SW sec. 26-5s-5e. Drlg. 5,880 ft. in shale.

Stephens County

Coline Oil Co. No. 1 Johnson, SW SE NE sec. 1-2n-8w. Bldg. drk.

W. G. Endicott et al No. 1 McFatridge, NW NW SW sec. 11-3s-9w. T.D. 1,515 ft. S.D.

T. H. McCasland et al No. 1 Hildebrand, SW SE NE sec. 1-3s-7w. Arbuckle 4,360 ft.; T.D. 4,601 ft.; D.&A.

Ed Parson No. 1 Olson, C SW SW sec. 21-2-8w. Drlg. 1,323 ft.

Tillman County

Beal & Toler No. 1 Magill, SE SE SE sec. 18-1n-16w. T.D. 250 ft.; S.D. for csg.

Rochelle Bernheimer No. 1 Tate, NE NE NW sec. 16-1s-19w. T.D. 3,001 ft.; S.D. for orders.

Indian Territory Illuminating Oil Co. No. 1 Drum, C SW NW sec. 32-2s-17w. Loc.

Johnson, Young & Mitchell No. 1 Donahoe, SW NW NW sec. 7-4s-17w. T.D. 3,200 ft.; S.D.; contract depth.

Lynn Oliver No. 1 Rilling, SE SE NW sec. 22-1s-15w. Granite Wash 775 ft. T.D. 1,006 ft.; repairing mch.

D. S. Smith No. 1-A Hammill, NE NE NW NW sec. 6-5s-15w. T D. 2,425 ft.; S.D.

ARKANSAS

Bradley County

Phillips Pet. No. 1 M. Bird, N half NW NE sec. 28-16-12. Drlg. 600 ft.

Clark County

John G. Wooten No. 1 Z. T. Sparkman, sec. 1-11-20. S.D. 20 ft.

Columbia County

Buford & Co. No. 1 Kendrick, 330 ft. S and E. NW cor. SE¼ sec. 7-19-18. Drlg. 4,100 ft.

Dallas County

Walter Lown No. 1 G. Atkinson, NE NW SE sec. 7-10-13. 12-in. cmt. 76 ft.; W. O.C.S.

A. F. Tarver No. 1 Wilbon, sec. 21-9-13. T.D. 3,056 ft., dry and abnd.

Hempstead County

Easton et al No. 2 Conway-Tiller, 330 ft. N and E. SW cor. SW sec. 34-12-27. Cg. 3,001 ft.

Imperial Oil & Gas Prod. Co. No. 1 Foster Est., sec. 35-12-26. Cg. 2,350 ft.

Lewis Heys No. 2 State of Ark. (Red River bed), SE cor. sec. 18-14-25. R.U.

Spooner et al No. 2 Lafferty, sec. 17-14-24 Tstg.; running 4-in. csg. Tested S.W.; no oil. W.O. T.D. 2,451 ft.

Stewart Oil Co. No. 1 fee, sec. 31-12-23. Drlg. 1,200 ft.

Little River County

M. E. Sanderson No. 1 Punning, sec. 6-13-20. 10-in. cmtd. 168 ft.; W.O.C.S.

Joe Strahan No. 1 Dierks, SW SE sec. 21-12-28. Loc.

Lonoke County

Frank F. Silver No. 1 Joe Chambers, sec. 17-2-7. Cmt. 7-in. 1,394 ft.; W.O.C.S.

Miller County

Erwin & Leach No. 1 Red River Farms, sec. 2-17-26. 10-in. set; cmt. 447 ft.; W.O.C.S.

C. V. Lenz No. 7 Dale, O.W.D.D., sec. 24-15-26. Drlg. 3,720 ft.

McClanahan et al No. 1 Miller Ld. & Lbr. Co., SW cor. sec. 2-18s-28w. Cg. 6,036 ft.

Odell Hinson No. 1 Montana Realty Co., 330 ft. S and W NE NW NW sec. 3-17-28. Cg. 5,037 ft.

Nevada County

Benedum & Trees No. 1 Groves, C N half SE NW sec. 10-14-20. D.S. 1,960-90 ft.; dry; drlg. 1,700 ft.

Steel & Warmack No. 1 Wm. Haynil, SE SE NW sec. 6-14-21. S.D. 200 ft.

Union County

Penn-Ark. Corp. No. 1 W. N. Rauliston, 330 ft. S and E. NW NW SE sec. 12-17-14. T.D. 1,146 ft.; S.D. on matl.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo-Rodessa

Ambrose No. 1 Johnson, 50 ft. E, 12 ft. N. SW cor. tr. in street N of Blk. 5. Loc.

American Lib. Oil Co. No. 3 Norton, NE cor. sec. 17-23-15. Drlg. 4,950 ft.

Ark.-La. Gas Co. No. 2 Teamer, NW SE SW sec. 13-23-16. Milling on offset csg. T.D. 6,067 ft.

Blackwell O. & G. Co. No. 2 Wynn, sec. 8-23-15. Drk.

J. G. Collins No. 2 Caddo School Bd., sec. 8-23-15. R.U. and S.D.

David L. Harlin No. 1 W. D. Norton, NW cor. sec. 22-23-15. Loc.

Idessa Oil Co. No. 1 D. K. Sumner, NW SW SE sec. 10-23-15. Drlg. 5,010 ft.

J. Edward Jones No. 1 Rockefellow, Lot 3, Blk. 21, sec. 23-23-16. Comp., flw. 74 bbls. dist. 18 hrs.; 6 mi. gas; ½-in. tbg. ck. T.D. 6,005 ft.

J. Edward Jones No. 1 M. Z. Sharp, 1,227 ft. N, 330 ft. E, SW cor. SE¼ sec. 4-23-16. Drk.

La. Oil Rft. Co. No. 4 Ratcliff, NW cor. sec. 16-23-16. 10-in. cmt 2,043 ft. W.O. C.S.

Lion Oil Ref. Co. No. 3 Wynn, SW cor. sec. 9-23-15. Drlg 4,632 ft.

Lion Oil Ref. Co. No. 4 Wynn, 330 ft. N, 990 ft. E. SW cor. sec. 9-23-15. Drlg. 3,883 ft.

Louisian Oil Ref. Co. No. 2 Ratcliff, NW cor. sec. 16-23-15. Csg. 5,985 ft.

Louisiana Oil Ref. Co. No. 3 Ratcliff, NW cor. sec. 16-23-15. Drlg. 5,396 ft.

Magnolia No. 8-A Caddo Lv. Bd., NW SW NE sec. 21-23-16. Drlg. 5,500 ft.

Magnolia No. 6 Tyson, NE cor. sec. 13-23-16. 7-in. cmt. 6,013 ft. T.D. 6036 ft. W.O.C.S.

McAlester Fuel Co. No. 1 W. M. Mitchell, SW cor. sec. 20-23-16. Drlg. 5,613 ft.

McAlester Fuel Co. No. 2 N. S. Tyson, C sec. 22-23-16. Flw. 5 B.P.H. T.D. 6,016 ft. W.O.

Magnolia No. 9-A Caddo Levee Bd., SW SE NW sec. 21-23-16. Drlg. 2,236 ft.

Magnolia No. 3 N. S. Spearman, 1,013 ft. S, 704 ft. E, NW cor. SW sec. 18-23-15. Reaming 6,475 ft.

Phillips No. 1 Rose McDonald, NW SW NE sec. 17-23-16. 7-in. csg running. T.D. 6,088 ft.

Phillips Pet. Co. No. 7 Norton, NE SE NW sec. 17-23-15. Drlg. 4,680 ft.

Phillips Pet. Co. No. 2 Rose McDonald, NW S½ NE sec. 17-23-16.

Phillips No. 1 Wilbanks, NE SW SW sec. 8-23-15. Cg. 5,865 ft.

Phillips No. 2 Cora Woods, 330 ft. N and E, SW cor. N½ NE sec. 17-23-15. Comp., flw. 22 B.P.H. ¾-in. tb. ck. T.D. 6,082 ft.

Phillips No. 3 Cora Woods, 330 ft. N and E, SW cor. NE NE sec. 17-23-15. Comp., flw. 38 B.P.H. ¾-in. th. ck. T.D. 6,047 ft.

Phillips Pet. Co. No. 4 Cora Woods, SE NW NE sec. 17-23-15. 10-in. cmt. 2,336 ft. W.O.C.S.

Red Iron Drlg. Co. No. 1 Means, 330 ft. N and E, C sec. 9-23-15. 7-in. cmt. 5,800. T.D. 6,005. W.O.C.S.

Snowden & Anding No. 2 Taylor, Lot 7, Blk. 46, sec. 23-23-16. 7-in. cmt. 5,951 ft. T.D. 5,955 ft. W.O.C.S.

United Gas No. 7 Brewer Unit, SW cor. sec. 22-23-16. Drlg. 5,910 ft.

United Gas No. 8 Brewer Unit, 83 ft. N. 588 ft. W. C sec. 22-23-16. Drlg. 1,987 ft.

United Gas No. 2 fee 574, SW SE sec. 16-23-16. 7-in. cmt. 5,772 ft. Comp., flw. 75 B.P.H. ½-in. tb. ck. T.D. 5,995 ft.

United Gas No. 3 fee 574, NE SE sec. 16-23-16. Drlg. 5,475 ft.

United No. 2 Gibson, NE SE NW sec. 15-23-16. Comp., flw. 32 B.P.H. ½-in. tb. ck. T.D. 5,993 ft.

United Gas No. 2 L. Gibson est., sec. 15-23-16. Comp., flw. 72 B.P.H 37/64-in. tb. ck. T.D. 5,980 ft.

United Gas No. 3 L. Gibson est., sec. 15-23-16. Comp., flw. 33 B.P.H. ½-in. tb. ck. T.D. 5,987 ft.

United Gas No. 10 M. L. Pitts, SE SW SW sec 13-23-16. .Comp., flw. 3 bbls. dist. per hr., ½-in. tb. ck. T.D. 6,097 ft.

United Gas No. 24 Rodessa Oil & Ld. Co., SE NW SE sec. 17-23-16. Drlg. 1,515 ft.

United Gas No. 25 Rodessa Oil & Ld. Co., NE NW NE sec. 22-23-16. Drlg. 1,631 ft.

United Gas No. 3 W. B. Spearman, SW cor. sec. 15-23-16. Comp., flw. 16 B.P.H. 26/64-in. tb. ck. T.D. 5,988 ft.

United Gas No. 4 W. B. Spearman, NE SW sec. 22-23-16. Drlg. 5,985 ft.

United Gas No. 6 N. S. Spearman, 600 ft. S, 650 ft. E, NW cor. sec. 18-23-15. 9-in. cmt. 2,205 ft. Drlg. 3,734 ft.

United Gas No. 7 N. S. Spearman, SW cor. sec. 7-23-15. Cmt. 9-in. 2,201 ft. W.O.C.S.

United Gas No. 4 J. L. Young, NE cor. sec. 28-23-16. Comp., flw. 26 B.P.H. ⅝-in. tb. ck. T.D. 5,954 ft.

R. J. Wolfe No. 1 R. G. Fitts, 330 ft. N line, 132 ft. E line, SW cor. SE NE sec. 8-23-15. Comp., flw. 24 B.P.H. 3/16-in. th. ck. T.D. 5,973 ft.

N. LOUISIANA WILDCATS

Bienville Parish

W. V. Bowles et al No. 1 Bank of Ringgold, sec. 3-15-9. Drlg. 4,932 ft.

DeSoto O. & G. Co. No. 1 Dunn and Olsen, C N½ NW¼ sec. 15-16-10. Drlg. 1,250 ft.

J. W. Leonard No. 1 Courtney, 330 ft. N and W, SE cor. sec. 5-17-7w. T.D. 7,185 ft. S.D.

Rondeau et al No. 1 Locke, NE cor. sec. 19-15-10. Drlg. 205 ft.

Bossier Parish

Ark-La Gas Co. No. 1 J. G. McDade, NW cor. sec. 8-17-11. 13-in. set 254 ft. W.O.C.S.

Geo. H. Bringhurst et al No. 2 Buckley, 1,000 ft. N, 330 ft. W, SE cor. sec. 35-21-13. Cg. 2,155 ft.

Premier Inv. Co. No. 30 Wyche, NE cor. sec. 14-19-11. Comp., pump 12 B.P.D. T.D. 432 ft.

Premier Inv. Co. No. 31 Wyche, NE NW NW sec. 14-19-11. Drlg. 291 ft.

Tidwell et al No. 1 Nattin, 200 ft. S and W, C sec. 15-22-14. Hole clean; S.D.; T.D. 2,954 ft.

United Gas No. 1 Roos, NW cor. sec. 23-17-12. Cg. 3,100 ft.

United Gas No. 1-F H. L. Skannal, 660 ft. S. 2,640 ft. W, NE cor. sec. 26-17-12. Drlg. 4,963 ft.

Caddo Parish

Bayou State No. 2 S. Jolly, NW NE SW sec. 22-22-15. Comp., pumped 15 B.P.D. T.D. 1,001 ft.

W. D. Chew No. 1 Spell, SW cor. SE SW sec. 29-21-15. Comp., pump 25 B.P.D. T.D. 2,122 ft.

C. C. Crews No. 2 Pender NW SW sec. 11-20-15. Drlg.

Gulf Ref. Co. No. 1 E. P. Hatcher, 660 ft. N and E, SW cor. SE¼ sec. 11-17-15. Cg. 5,800 ft.

J. B. Hutchinson No. 2 Storey-Phillips, SW cor. NE NW sec. 28-16-13. T.D. 1,710 ft., S.D. rig repair.

Innerstate Drlg. Co. No. 1 E. Smith, SW SE SW sec. 35-21-15. Acidized; testing; T.D. 1,628 ft.

Juan et al No. 1 P. Hobbs, SE cor. NW NW sec. 28-21-15. T.D. 1,672 ft.; W.O.S.R

Maja Oil Co. No. 1 Mathew, NE SE sec. 10-20-15. T.D. 2,204 ft.; W.O.S.R.

Morefield & Prine No. 3 Stokeley, sec. 5-20-16. Drlg.

Prairie River Synd. No. 1 Hutchinson, 330 ft. N and E, SW NW sec. 15-15-12. Cg. 6,750 ft.

Simplex No. 5 Natalie, SE W½ SE sec. 10-20-15. Drlg. 600 ft.

Stanolind O. & G. Co. No. 109, NE cor. sec. 14-21-15. T.D. 1,682 ft.; acidized.

Stanolind O. & G. Co. No. 110, NE cor. 14-21-15. R.U.

Stanolind O. & G. Co. No. 111, NE cor. sec. 14-21-15. Drlg.

Stewart-Williams No. 1 Connell, NE sec. 10-20-15. 10-in. set 80 ft.; W.O.C.S.

Stewart-Williams No. 3 Iron, SW NE 10-20-15. T.D. 2,175 ft.; will run csg.

Caldwell Parish

Crickett & Woods No. 1 fee, NW SE NE sec. 18-11-3. Drlg. 1,400 ft.

Claiborne Parish

E. T. Oakes No. 1 H. W. Patton, NE cor. sec. 1-20-5. S.D.; W.O. 4,987 ft.

United Gas Public Service Co. No. 2 Durfett, 660 ft. N and 1,980 ft. E, SW cor. sec. 31-20-5. T.D. 8,616 ft., fshg. for D.P.

United Gas No. 1 A. P. Taylor, SE cor. sec. 5-19-5. Drlg. 2,342 ft.

De Soto Parish

J. E. Carlson No. 1 A. P. Garland, 250 ft. S and E, NW cor. SW sec. 7-14-14. S.D. 2,150 ft.

Fife et al No. 1 Ramsey, sec. 36-11-11. W.O.D.S. 1,425 ft.

R. Kamon No. 1 Roscoe, SE NW sec. 14-12-13. T.D. 1,124 ft.; showing; will test.

W. C. Nabors No. 1 fee, C NE¼ sec. 8-12-13. S.D. 1,217 ft.

R. C. Payne No. 1 Harris, sec 11-13-14. Drlg. 2,375 ft

T. W. Simmons No. 1 Johns, 330 ft. N. 990 ft. W cen. sec. 20-14-16. 10-in. set 150 ft. W.O.C.S.

Franklin Parish

S. C. Jensen No. 1 Dailey, sec. 12-11-6. Drlg. 2,130 ft.

Grant Parish

Grant Oil Co. No. 1 Swope, SW N½ NE SW sec. 17-9-1e. R.U.

Pet. Prod. Co. No. 1 Buffington, SE NE sec. 18-9-1. Drlg. 950 ft.

Perry et al No. 1 Barrett, 150 ft. N and W, SE NE sec. 17-9-1e. 6-in. cmt. 1,583 ft.; W.O.C.S.

Rogers Oil No. 2 Swope, SW NW SW sec. 17-9-1e. R.U.

LaSalle Parish

H. L. Hunt No. 8 Urania, NE SW NW sec. 25-10-1. T.D. 1,542 ft.; W.O.S.R.

Urania Oil & Gas No. 1 Urania, NW cor. sec. 7-10-2. S.D. 300 ft.

Morehouse Parish

J. B. Collins et al No. 1 E. M. Clarke, SE NE sec. 10-20-7e. T.D. 3,760 ft.; S.D.; wtg. on D.S.T.

So. Carbon Co. No. 17 Tensas, NE cor. sec. 4-20-4. Loc.

United Gas No. 42 Crossett, SE cor. sec. 25-22-4e. T.D. 2,230 ft., testing.

United Carbon Co. No. 6 Stovall, SE cor. sec. 28-21-4. R.U.

United Carbon Co. No. 7 Stovall, NW cor. sec. 27-21-4. R.U.

Natchitoches Parish

Ivan A. Allen No. 1 Simpson, sec. 12-7n-7w. T.D. 50 ft. S.D.

C. D. Morrison No. 1 Moffitt, 250 ft. N, 250 ft. W, SE cor. sec. 19-10-10. 10-in. set 110 ft.; W.O.C.S.

Union Pet. Co. No. 2 DeBlieux, 2,395 ft. E, 150 ft. S of W cor. sec. 83-10-7w. T.D. 3,354 ft.; S.D. for wtr.

Ouachita Parish

Carbons Con. No. 1 Burt, NE cor. SE sec. 35-19-3e.

Red River Parish

Byrd Exp. Co. No. 1 Edge, SW NE sec. 29-13-11. Hole clean; T.D. 2,499 ft.; W.O.S.R.

Richland Parish

Gulf Ref. Co. No. 15 R. R. Rhymes et al, sec. 32-17-6e. Drlg. 7,226 ft.

J. S. Morrisey No. 1 Jones, 1,293 ft. N. 636 ft. E, SW cor. sec. 15-18-7e. T.D. 3,260 ft.; dry and abnd.

Sabine Parish

Arcadia Ref. No. 1 Henderson, NE SE SE sec. 30-9-13. Drlg. 1,623 ft.

M. C. Forsman No. 1 Patrick, NE SW sec. 21-9-13. W.O.S.R.

F. G. Cox No. 1 Whitney Corp., C NW NE sec 8-9-13. Prep. run csg. T.D. 5,503 ft.

Ellis Prod. Co. No. 1 Small, SE NW SE sec. 24-7-11. 6-in. cmt. 2,682 ft.; W.O. C.S.

E. G. Cravath No. 1 Delaney, sec. 31-9-13. Comp., pump 10 bbls oil 100 S.W. T.D. 2,152 ft.

J. R. Keen No. 1 Long Bell, 276 ft. N and 288 ft. W, SE cor. NE SW sec. 5-18-13. Acidized; W.O.S.R.

Pozey Sisters Oil Co. No. 3 Burkett, NE cor. sec. 10-9-13. S.D. 3,096 ft.

A. H. Tarver No. 2 Baker, NW cor. NE sec. 36-8-12. D.S. test, 1,000,000 ft. gas; T.D. 5,200 ft. S.D. for water.

J. J. Watson No. 2 Reneau, NE SE SW sec 29-9-13. Cmt. 62, 1,537 ft. T.D. 1,981 ft.

Union Parish

Federal Pet. Co. No. 1 fee, 330 ft. S and W, NE cor. sec. 34-21-3e. T.D. 7,021 ft.; lost hole; cementing back to complete in Monroe gas sand.

Innerstate Natl. Gas Co. No. 55, SE cor. sec. 5-20-4. 6-in. cmt. 2,150 ft.; W.O.C.S.

Innerstate Natl. Gas Co. No. 53 fee, SE cor. sec. 31-21-4. 12-in. cmt. 176 ft.

Innerstate Natl. Gas Co. No. 50 fee, SE cor. sec. 29-21-4. 6-in. cmt. 2,069 ft.; W. O.C.S.

Memours Corp. No. 1 Langford, sec. 10-21-3e. Comp. 1,500,000 ft., 1,020 lbs. rock pr. T.D. 2,180 ft.

So. Carbon Co. No. 89 fee, 660 ft. S and E, NW cor. sec. 9-21-4e. 6-in. cmt. 2,144 ft.; W.O.C.S.

So. Carbon Co. No. 12 Grayling, NE cor. sec. 29-21-4e.

So. Carbon Co. No. 13 Grayling, SE cor. sec. 5-21-4e. Loc.

So. Carbon Co. No. 14 Grayling, SE cor. sec. 5-21-4e. Loc.

So. Carbon Co. No. 15 Grayling, SW cor. sec. 4-21-4e. Loc.

Webster Parish

W. D. Ambrose No. 1 T. Crichton, 330 ft. N and E, SW cor. SW NW sec. 36-18-9. P.B. to 5,770 ft.; testing.

Magnolia Pet. Co. No. 5 J. Cox, SW SE sec 23-21-10. Drlg. 1,572 ft.

R. W. Norton No. 2 Josey & Masey, C W½ NE NW sec. 27-21-10. Clearing loc.

Red Hawk Oil Co. No. 1 Mayfield, sec. 9-23-9. 10-in. set 90 ft.; W.O.C.S.

Ohio Oil Co. No. 1 R. M. Coyle, NE SE sec. 22-21-10. Drlg. 3,335 ft.

Ohio Oil Co. No. 1 Bodcaw Lbr. Co., C NE SE sec. 28-21-10. Drlg. 4,388 ft.

L. R. Skidmore No. 1 Barnett, sec. 29-17-9. S.D. for wtr. 1,026 ft.

United Gas No. 2 Davis, 660 ft. S and E, NW cor. sec. 23-21-10. R.U.

United Gas No. 1 Mixon, SE SW sec. 22-21-10. Drlg. 3,930 ft.

Woodley Pet. Co. No. 2-A L. C. Cox, SW NE sec. 22-21-10. Drk.

Woodley Pet. Co. No. 2-B L. C. Cox, cen. SW SW sec. 23-21-10. Drk.

Woodley Pet. Co. No. 4-B Gray, cen. NE NE sec. 27-21-10. Drlg. 3,654 ft.

SOUTH LOUISIANA FIELDS

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 35 Watkins, sec. 8-12s-12w. Drlg. sd. and shells 2,534 ft.

Caillou Island—Terrebonne Parish

Texas Co. No. 39 State, sec. 17-23s-20e. T.D. 4,145 ft.; P.B. 3,100 ft.

Charenton—St. Mary Parish

Mike Hogg No. 1 State, sec. 5-13s-9e. Drlg. sh. 510 ft.

Dog Lake—Terrebonne Parish

Texas Co. No. 19 State, sec. 5-22s-16e. Drlg. sdy. sh. 6,654 ft.

Cameron Meadows—Cameron Parish

Burton Sutton No. 14 School Land, sec. 16-14s-13w. T.D. 2,538 ft.; rmg.

Magnolia-Humble No. 18 Cameron Meadows, sec. 21-14s-13w. Drk.

Darrow—Ascension Parish

Humble O. & R. Co. No. 4 Community, sec. 33-10s-2e. Drk.

Humble O. & R. Co. No. 13 Humble Community, sec. 33-10s-2e. T.D. 4,423 ft.; P.B. and sdtrkg.; top salt 5,178 ft.; drlg. salt 5,254 ft.

Fausse Point—Iberia Parish

Texas Co. No. 2 State, sec. 35-11s-8e. Drlg. wtr. sd. 5,830 ft.

Four Isle—Terrebonne Parish

Texas Co. No. 7 State, sec. 14-21s-6e. Drlg. caprock 7,240 ft.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 12 Castle, sec. 13-9s-8w. T.D. 7,073 ft.; 7-in. csg. 7,050 ft.

Fohs Oil Co. No. 13 Castle, sec. 14-9s-8w. T.D. 7,035 ft.; 7-in. csg. on bottom.

Fohs Oil Co. No. 14 Castle sec. 13-9s-8w. Drk.

Fohs Oil Co. No. 15 Castle, sec. 13-9s-8w. Drk.

Union Sulphur Co. No. 8 Barbe, sec. 11-9s-8w. T.D. 8,671 ft.; P.B. 6,267 ft.; W. O.C.

Union Sulphur Co. No. 2 Bel, sec. 12-9s-8w. Drlg. sd. and sh. 6,564 ft.

Union Sulphur Co. No. 2 Cole, sec. 12-9s-8w. 6⅝-in. csg. 5,254 ft.; T.D. 5,257 ft.; I.P. 300 B.P.D. through ⅜-in. ck.

Union Sulphur Co. No. 2 Kaufman, sec. 13-9s-8w. T.D. 6,773 ft.; P.B. 6,325 ft. drlg. sh. 7,308 ft.

Union Sulphur Co. No. 10 Powell, sec. 29-7s-2w. Drk.

Union Sulphur Co. No. 13 State, sec. 12-9s-8w. Drk.

Union Sulphur Co. No. 15 State, sec. 12-9s-8w. Drk.

Hackberry—Cameron Parish

Gulf Oil Corp. No. 21 Irwin, sec. 12-12s-10w. Drlg. sh. 8,334 ft.

Stanolind O. & G. Co. No. 5 Carter-Severing, sec. 22-12s-10w. R.U.

Stanolind O. & G. Co. No. 24-B Gulf Ld., sec. 14-13s-10w. Drlg. sd. and sh. 4,852 ft.

Stanolind O. & G. Co. No. 2 Portie, sec. 23-12s-10w. Drlg. sh. 6,480 ft.

Stanolind O. & G. Co. No. 7-A School Ld., sec. 16-12s-10w. R.U.

Texas Co. No. 21 State, sec. 12-12s-10w. Drk

Texas Co. No. 19-B State, sec. 13-12s-9w. T.D. 6,683 ft.; drlg. sh. 5,160 ft.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 1 Barrileau, sec. 59-13s-8e. T.D. 8,258 ft.; P.B. 8,035 ft.; sd.kd.; drld. to 8,850 ft.; will run 5-in. csg. to 7,350 ft.; sdtrkg.

Herton Oil Co. No. 2 Carter, sec. 38-13s-9e. Drlg. sh. 1,200 ft.

Jennings—Acadia Parish

Lake City Oil Co. No. 1 Jennings-Haywood, sec. 46-9s-2w. 6⅝-in. csg. 1,786 ft.; rig up to pump.

Stanolind O. & G. Co. No. 16 Houssiere-Latrielle, sec. 47-9s-2w. T.D. 7,222 ft.; 7-in. csg. 7,128 ft.; failed to flow.; rocking with gas.

Stanolind O. & G. Co. No. 17 Houssiere-Latrielle, sec. 47-9s-2w. T.D. 7,204 ft.; reaming.

Superior Oil Prod. Co. No. 1 Leckett, sec 42-9s-2w. T.D. 6,380 ft.; 7-in. csg. 6,342 ft.; flowed 278 bbls. first 12 hrs. through 11/64-in. ck.

Lafitte—Jefferson Parish

Texas Co. No. 5 Lafitte, sec. 20-17s-24e. T.D. 9,974 ft.; 7⅝-in. csg. 9,920 ft.; I.P. 475 bbls. of oil through 21/64-in. ck.; T.P. 3,160 lbs.; gravity 42.

Texas Co. No. 5 Rigolettes, sec. 29-17s-24e. Cg. sh. and sd. 10,279 ft.

Lake Barre—Terrebonne Parish

Texas Co. No. 37 Lake Barre State, T.D. 7,948 ft.; cutting and pulling stuck drill pipe; fsg.

Texas Co. No. 38 State, sec. 38-21s-19e. Top salt 1,355 ft.; drlg. salt 3,079 ft.

Lake Hermitage—Plaquemines Parish

Gulf Oil Corp. No. 6, LaFourche, sec. 11-8s-25e. Drk.

Lake Pelto—Terrebonne Parish

Texas Co. No. 15 State, sec. 17-23s-18e. Drlg. sd. 5,754 ft.

Leesville—LaFourche Parish

Gulf Oil Corp. No. 11 Allen Land, Top salt 5,639 ft.; T.D. 5,659 ft.; P.B. T.D. 3,877 ft.; perf. csg. 3,774-84 ft.; I.P. 4 B.P.H.

Lincoln Oil Co. No. 8 State, sec. 34-21s-22e. T.D. 4,962 ft.; 7-in. csg. 4,898 ft.; I.P. 1,600 B.P.D. through ¼-in. ck.

Texas Co. No. 51 Leesville, sec. 34-21s-22e. Drk.

Texas Co. No. 52 Leesville, sec. 34-21s-22e. Drk.

Texas Co. No. 52 Leesville, sec. 37-21s-22e. Drk.

New Iberia—Iberia Parish

Crysanthon et al No. 1 Gulf fee, sec. 71-12s-7e. T.D. 7,336 ft.; P.B. 6,800 ft.; 7-in. csg. 6,829 ft.; making squeeze job; no report.

H. Fostiades No. 3 Gulf Ld., sec. 25-12s-7e. Drk.

H. Fostiades No. 3 Schwing, sec. 25-12s-7e. Drk.

Wm. Hollis No. 4 Boliver, sec. 56-12s-7e. Drlg. sh. and sd. 4,896 ft.; no report.

Wm. Hollis No. 2-A Bullock-Burke, sec. 25-12s-7e. 7-in. csg. 3,950 ft.; W.O.C.

Wm. Hellis No 2 Schwing, sec. 56-12s-7e. T.D. 6,400 ft.; P.B. 3,990 ft.; I.P. 528 B.P.D. through ¼-in. ck.

Texas Co. No. 1 Clementine, sec. 25-12s-7e. Drlg S.W. sd. 6,128 ft.

Texas Co. No. 1 Granite, sec. 25-12s-7e. T.D. 4,478 ft.; 7-in. csg. 4,445 ft.; I.P. 513 B.P.D. through ¼-in. ck.

Texas Co. No. 3-B Hanzen, sec. 54-12s-7e. R.U.

Texas Co. No. 1 Schwing, 10-in. csg. 1,341 ft.; T.D. 6,732 ft.; tstg.

Roanoke—Jefferson Davis Parish

Humble O. & R. Co. No. 5 Devilbiss, sec. 14-9s-42. Drlg. sh. and L. 8,557 ft.

Port Barre—St. Landry Parish

Gulf Oil Corp. No. 14 Wilson Cochran, sec. 4-6s-5e. T.D. 3,889 ft.; P.B. 3,350 ft.; W.O.C.

Pan American Prod. Co. No. 2 Garland, sec. 4-6s-5e Drk.

Pan American Prod. Co. No. 1 Haskins Garland. T.D. 3,339 ft.; P.B. 3,327 ft.; swb. oil and wtr.; deepening.

H. J. Weir No. 2 Thompson, sec. 20-6s-5e. Abd. 3,818 ft.

St. Martinville—St. Martin Parish

Continental Oil Co. No. 1 fee, sec. 57-11s-6e. 13⅜-in. csg. 1,387 ft.; T.D. 6,707 ft., pulled drill pipe in two 90 ft. off botton; hole cleaned; drlg. sh. 7,210 ft.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 782 fee, sec. 29-9s-10w. Drlg. sdy. sh. 4,178 ft.

Union Sulphur Co. No. 834 fee, sec. 20-9s-10w. Drlg. sh. 2,448 ft.

Union Sulphur Co. No. 835 fee, sec. 20-9s-10w. Drlg. 515 ft.

Tepetate—Acadia Parish

Continental Oil Co. No. 7-A Homeseekers, sec. 29-7s-2w. Drlg. sdy. sh. 6,517 ft.

Continental Oil Co. No. 2 P. W. Miller, sec. 28-7s-2w. Drlg. sh. and L. 7,717 ft.

Continental Oil Co. No. 1 Ortego, sec. 29-7s-2w. T.D. 8,318 ft.; I.P. 234 B.P.D. through 5/32-in. ck.

Continental Oil Co. No. 1 Stoddard, sec. 29-7s-2w. Drk.

Continental Oil Co. No. 6-A Welch, sec. 28-7s-2w. Drlg. sh. and L. 7,249 ft.

Vinton—Calcasieu Parish

Vinton Pet. Co. No. 1 fee, sec. 34-10s-12w. T.D. 4,746 ft.; temp. abd.

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w. S.D. 2,450 ft.

Allen Parish

Humble O. & R. Co. No. 3 Bel, located in cratered hole, sec. 26-6s-7w. 10¾-in. csg. 165 ft.; drlg. sdy. sh. 1,250 ft.

Avoyelles Parish

Frost Oil Co. No. 1 Hines Lumber Co., sec. 3-3n-4e. Drk.

Calcasieu Parish

Buhler Oil Co. No. 2 Faizt, sec. 26-8s-10w. Old T.D. 4,412 ft.; S.D. 3,755 ft.

General Crude Oil Co. No. 1 George P. Buhler, sec. 30-8s-9w. Drlg. sh. 6,602 ft.

Cameron Parish

Magnolia Pet. Co. No. 1, Johnson Bayou, sec. 16-15s-14w. Drlg. sh. 3,537 ft.

Magnolia Pet. Co. No. 1 Raymond Lebau, sec. 13-12s-9w. R.U.

Pure Oil Co. No. 1, Mallard Bay, sec. 22-

13s-3w. 18⅝-in. csg. 1,499 ft.; drlg. sh. 2,450 ft.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Vingnes, sec. 40 8s-2e.T.D. 5,655 ft.; washing over D.S.
Cavalier Oil Co. No. 1 Young, sec. 62-4s 1w. Drk.

East Feliciana Parish

East Feliciana Oil No. 1 West & Budding sec 17-1s-1w. Spudded 15 ft. and S.I.

Bayou Blue—Iberville Parish

Humble O. & R. Co. No. 1 Wilbert, sec. 67-9s-11e. Moving in rig.

Iberia Parish

Jefferson Lake Oil Co. No. 409 Lake Pigneur, Twp. 12s-3e. Drlg. sh. 5,910 ft.
Texas Co. No. 1-B State, Vermillion Bay, sec. 16-15s-6e. Drlg. sdy. L. 8,374 ft.

Jefferson Parish

Triangle Oil Co. No. 1 Conroe, sec. 125-12s-11e. R.U.

Jefferson Davis Parish

Shell Pet. Corp. No. 1 Joe Sturdivant sec. 25-10s-4w. 10¾-in. csg. 2,616 ft. drlg. sh. and L. 8,110 ft.
Stanolind O. & G. Co. No. 1 C. E. Britt sec. 15-10s-3w. 9⅝-in. csg. 8,842 ft.; T.D. 9,944 ft.; drill stem stuck.

Livingston Parish

Coastline Oil Co. No. 1 Addison Trust Co., sec. 7-7s-3e. Drk.

Plaquemines Parish

Gulf Oil Corp. No. 1 Bay-Adams, sec. 25-32s-19. Drk.
Tide Water Oil Co. No. 1 Manhattan Fruit Co. O.W.D.D.; T.D. 3,532 ft.; P.B. and abd.
Tide Water Oil Co. No. 2 Manhattan Fruit Co., sec. 19-13s-12e. R.U.

St. Bernard Parish

John Cartwright No. 1 Meraux Nunez, sec. 19-13s-12e. Sd. 6,477 ft.
Gulf Oil Corp. No. 1 Lake Lery, sec. 28-14s-14e. Drk.

St. James Parish

Shell Pet. Corp. No. 1 Colonial Sugar, sec. 5-12s-5e. T.D. 7,522 ft.; top salt 7,493 ft.; P.B. 3,316 ft.; abd.
Shell Pet. Corp. No. 2 Colonial Sugar, 4,800 ft. N of No. 1, sec. 15-12s-5e. Drk.

St. Landry Parish

Stanley Thompson No. 1 Lewis, sec. 29-5s-6e. Drk.

St. Martin Parish

Texas Co. No. 2 State, sec. 14-10s-9e T.D. 8,909 ft.; drill stem stuck; pulled in two at 5,909 ft.; fsg.
Texas Co. No. 1 Bayou Sale, sec. 23-17s-9e. Drlg. sh. 3,110 ft.

St. Mary Parish

Texas Co. No. 1, Horse Shoe Bayou, sec. 40-17s-9e. Drlg. sdy. sh. 4,277 ft.

Terrebonne Parish

Humble O. & R. Co. No. 1 H. J. Ellender, sec. 23-19s-19e. Drlg. sdy. sh. 1,906 ft.

Vermilion Parish

Continental Oil Co. No. 1 O. C. Hebert sec. 20-12s-3e. T.D. 11,732 ft.; circulating with mud; well tried to blow out; fsg. for stuck D.S.
Delcambre & Shelton No. 1 Delcambre, sec. 63-12s-6e. S.D. 2,708 ft.
Del-Shell Exploration Co. No. 1 Landry hrs., sec. 1-13s-4w. S.D. 2,000 ft.
Louisiana Land & Expl. Co. No. 1 La. Fur Co. sec 16-15-1e Bldg. foundations.
Stanolind O. & G. Co. No. 1 Fred Stovall. Drk.

TEXAS

Week Ending October 3

GULF COAST FIELDS

Raccoon Bend—Austin County

Humble O. & R. Co. No. 7 Austin College, Wm. Harvey Sur. 10¾-in. csg. 1,101 ft.; T.D. 3,250 ft., 7-in. csg. 3,250 ft.
Humble O. & R. Co. No. 6-B Hardy, J. E. Grace Sur. Coring oil sand 4,110 ft.

Hastings—Brazoria County

W. L. Goldston No. 1 fee, Block 6, B.B.B. &C. Sur. R.U.
Humble O. & R. Co. No. 2 Brown, W. H. Snyder Sur. 10¾-in. csg. 1,890 ft. T.D. 6,150 ft. P.B. 6,118 ft.; running csg.
Humble Oil & Ref. Co. No. 1 Geisler, Block 34, H.T.&B. No. 29. Drk.
Stanolind O. & G. Co. No. 1 Floyd Brown, H.T.&B. Sur. No. 29. Drk.
Stanolind O. & G. Co. No. 1 Margaret Kidd, B. T. Masterson Sur. Loc.
Stanolind O. & G. Co. No. 4-B Brown, H.T.&B. Sur. No. 29. T.D. 6,060 ft. Running csg.
Stanolind O. & G. Co. No. 3 Drodgemeyer, H.T&B. Sur. No. 36. T.D. 1,874 ft. Running 10¾-in. csg.
Stanolind O. & G. Co. No. 1 Edwards, Wm. Henry Sur. 10¾-in. csg. 1,861 ft.; T.D. 6,060 ft., 7-in. csg. 5,992 ft.
Stanolind O. & G. Co. No. 4 Ford, A.C.H. &B. Sur. No. 1, 10¾-in. csg. 1,836 ft.; Drlg. shale and lime 4,240 ft.
Stanolind O. & G. Co. No. 5 Ford, A.C.H.& B. Sur. No. 1. Loc.
Stanolind O. & G. Co. No. 6 Ford, A.C.H.& B. Sur. No. 1. Loc.
Stanolind O. & G. Co. No. 1 Surface, B.B. B.&C. Sur. Drk.
Stanolind O. & G. Co. No. 1 Scott, H.T. &B. Sur. No. 29, 10¾-in. csg. 1,876 ft.; cg. sd. 5,912 ft.
Stanolind O. & G. Co. No. 1 Turner, A.C. H.&B. Sur. No. 1. Drlg. shale and shells 1,228 ft.
Stanolind O. & G. Co. No. 7 Williams, A.C. H.&B. Sur. No. 1. Loc.

Lockridge—Brazoria County

Gulf Oil Co. No. 2-A Wilkes and Smith, J. Robinson Sur. Drlg. sh. 3,236 ft.

Manvel—Brazoria County

Bowles & Borsodi No. 4 Norvell Co., Inc., H.T.&B. Sur. No. 23. R.U. and S.D.
Burton Drlg. Co. No. 1 Baldwin, Lot 115, H.T.&B. Sur. No. 92. Drk.
Harrison & Abercombie No. 2 Ewing, A.C. H.&B. Sur. Drlg. shale 4,365 ft.
Sterling Oil & Ref. Co. No. 1 Hamilton, E. Little Sur. R.U.
Texas Co. No. 1 A. Ellis, H.H. Little Sur. Drk.
Texas Co. No. 23 Houston Oil Field Assn., A.C.H.&B. Sur. No. 91; 10-in. csg. 1,130 ft. T.D. 4,058 ft., 7-in. csg. 4,044 ft.
Texas Co. No. 3 Lemmer, T. Spraggins Sur. 10-in. csg. 1,130 ft. T.D. 4,122 ft., 7-in. csg. 4,102 ft.

West Columbia—Brazoria

Sterling O. & G. Co. No. 1 J. A. Phillips, Geo. Kennilee Sur. Drk.
Texas Co. No. 14 Abrams, George Tenille League Sur. T.D. 3,061 ft.; P.B. 3,191 ft.; Drlg. sand and lime 3,040 ft.

Heyser—Calhoun County

Humble Oil & Ref. Co. No. 3 Welder, J. M. Rios Sur. Drk.
Humble O. & R. Co. No. 4-A Welder, J. M. Rios Sur. T.D. 5,470 ft.; 7-in. csg. on bottom. Tested gas, pulling screen and liner.
Humble O. & R. Co. No. 3-B Welder, A Sisneros Sur. T.D. 5,500 ft. Perf. 7-in. cg. 5,465-73 ft. Tested oil and S.W. making squeere job.
Humble O. & R. Co. No. 4-B Welder, A. Sisneros Sur. Drk.
Portilla Oil Co. No. 1 R. H. Welder, A. Sisneros Sur. Drk.
Portilla Oil Co. No. 1 Welder, A. Sisneros Sur. T.D. 5,494 ft. Making drill stem test.

Anahuac—Chambers County

Gulf Oil Corp. No. 4 Knowles, sec. 48, H. &T.C. Sur. 7-in. csg. 7,081 ft.; T.D. 7,175 ft. Swbg.
Gulf Oil Corp. No. 5 Knowles, sec. 48, H. &T.C. Sur. Drk.
Humble Oil & Ref. Co. No. 11 Braussard, sec. 63, H. & T. C. Sur. 9⅝-in. csg. 1,532 ft. Drlg. shale 1,987 ft.
Humble Oil & Ref. Co. No. 22 Middleton, sec. 58, H.T.&C. Sur. Drlg. shale.
Humble O. & R. Co. No. 23 Meddleton, sec. 58, H.&T.C. Sur. 10¾-in. csg. 1,574 ft.; drlg. sh. 5,674 ft.
Humble O. & R. Co. No. 13 Tyrell, sec. 52, H.&T.C. Sur. T.D. 7,100 ft.; 5½-in. csg. 7,079 ft; I.P. 25 B.P.H., ¼-in. ck.
Humble Oil & Ref. Co. No. 3-B White, J. McGahey Sur. R.U.
Humble O. & R. Co. No. 5-B White, J. McGahey Sur. T.D. 7,224 ft. P.B. 7,045 ft.; 5½-in. csg. 6,979 ft.; drld. plug 7,224 ft.; P.B. 7,047 ft.; swbd. S.W.; plugged back 6,925 ft. Abd.
Humble Oil & Ref. Co. No. 14 White, J. McGahey Sur. Drlg. shale 3,598 ft.
Humble O. & R. Co. No. 3 Wilcox, sec. 58, H.&T.C. Sur. 9⅝-in. csg. 1,503 ft.; drlg. sh. 5,872 ft.
Sun Oil Co. No. 22 White, J. McGahey Sur. Drlg. lime and sh. 4,417 ft.

Cotton Lake—Chambers County

Glenn H. McCarthy No. 1 McCarthy No. 4 Kilgore, J. Townsend Sur. Drk.
Humble O. & R. Co. No. 1, Howard Winfree Sur. R.U.
Humble O. & R. Co. No. 2 Howard, Winfree Sur. Loc.
Glenn H. McCarthy No. B Kilgore, J. Townsend Sur. 10¾-in. csg. at 1,180 ft.; T.D. 6,427 ft. Making drill stem test.
Humble O. & R. Co. No. 1 Dutton, Kate Dugat Sur. 10¾-in. csg. 1,624 ft. Abd. 6,664 ft.

Turtle Bay—Chambers County

Sun Oil Co. No. 1 C. J. Chambers, M. A. Carroll Sur. 16-in. csg. 1,197 ft. Coring sh. 4,543 ft.

Big Creek—Fort Bend County

Gulf Oil Co. No. 71 Davis, M. Young Sur. Drlg. sand 4,144 ft.
Jenal Oil Co. No. 3 Byron, M. Young Sur. Drlg. sand 2,929 ft.
H. L. Patton No. 1 Bryan, M. Young Sur. T.D. 1,717 ft.; S.D.
Thompson Drlg. Co. No. 1 W. C. Moore, B. Wickerson Sur. S.D. 620 ft.

Blue Ridge—Fort Bend County

Barnett Pet. Co. No. 1-B Blakely, Lot 7, Blk E, Drew Sur. Drlg. sand and lime 3,158 ft.
Ben G. Barnett No. 1-C Blakely, E. Drew Sur. Top salt 2,666 ft.; T.D. 2,667 ft.; swbd. Flowing gas.
H. H. Hoffman No. 1 Lee, J. Poitevent Sur. T.D. 4,014 ft.; 7-in. csg. 3,890 ft.; set liner. Rig. up to pump.
Texas Gulf Prod. Co. No. 1-B Blakely, Lot No. 7, E. Drew Sur. T.D. 3,887 ft.; P.B. to 2,250 ft. Drlg. sh. and sd. 4,325 ft.

Boling—Fort Bend County

Mack Hank Oil Co. No. 2-C Farmer, J. Scott Sur. Drlg. water sand 4,559 ft.
H. K. Spear et al No. 1 Kasperek, Simon Miller Sur. 7-in. csg. 3,960 ft.; drlg. sh. and sd. 4,011 ft.

Orchard—Fort Bend County

Gulf Oil Corp. No. 7-H Moore, Burnap Sur. Drk.
Gulf Oil Corp. No. 46 Moore, Leo Burknapp Sur. Drlg. sh. 7,107 ft.
Gulf Oil Corp. No. 48 Moore, J. Frazier Sur. Drlg. L. rock 2,545 ft.

Thompson-Fort Bend County

Robert Eikel No. 1 J. W. Hempel, S. Kennedy Sur. Drlg. sh. 5,342 ft.
Sterling O. & R. Co. No. 2 Booth, H. Christmas Sur. Drlg. sh. and lime 3,725 ft.

High Island—Galveston County

Stanolind O. & G. Co. No. 9-B Cade, M. Dunman Sur. R.U.
Stanolind O. & G. Co. No. 58 Cade, N. Fitzsimmons Sur. Drlg. 3,973 ft.
Stanolind O. & G. Co. No. 59-A M. Fitzsimmons Sur. R.U.

Dickinson—Galveston County

Humble O. & R. Co. No. 1 Mealy. Drlg. sh. 8,672 ft.
Humble O. & R. Co. No. 10-A Stewart, W. K. Wilson Sur. T.D. 8,707 ft.; rng. csg.
Keneo Oil Co. No. 2 Broughton, N offset to No. 1. Drlg. sh. 5,337 ft.
Humble O. & R. Co. No. 11-A Stewart, A. Edwards Sur. Drk.
Pan American Prod. Co. No. 1 Louise Craig, W. K. Wilson Sur. Cmtd. 410 ft. of liner; T.D. 8,300 ft.; I.P. 10 B.P.H.
Smith and MacDannald No. 1 Shelar, J. O. Jones Sur. 16-in. csg. 120 ft.; 10¾-in. csg. 981 ft.; W.O.C.
Stanolind O. & G. Co. No. 6 State River Red, 13⅜-in. csg. 2,119 ft.; T.D. 8,050 ft.; rmg.

Greens Lake—Galveston County

Sun Oil Co. No. 3 J. D. Hughes, Wm. C. Baker Sur. Reamed to 3,800 ft.; will core to 3,920 ft. and run coring test.
Sun Oil Co. No. 4 Hughes, W. C. M. Baker Sur. Drk.

Arriola—Hardin County

Republic-Houston Oil Co. No. 14 fee, E. Arriola Sur. 13⅜-in. csg. 835 ft.; T.D. 3,285 ft.; 9⅝-in. csg. 3,270 ft.; S.D.
Republic Prod. Co. No. 15 fee, E. Arriola Sur. Spudded.
Republic Prod. Co. No. 16 fee, E. Arriola Sur. T.D. 3,835 ft.; P.B. 3,004 ft.; W.O.C.

Batson—Harding County

Deering et al No. 5 Hooks, Donoho Sur. Spudded.
Deering et al No. 4 W. W. Cruse, F. H. Green Sur. Drlg. sh. 1,800 ft.

Sour Lake—Hardin County

Kirby Pet. Co. et al No. 1, Stephen Jackson Sur. A-34. Drlg. sh. 1,700 ft.

Mykawa—Harris County

Flanagan Oil Co. No. 1 M. J. Cowherd, Lot 260, Wm. Lovett Sur. T.D. 4,853 ft.; 7-in. csg. 4,780 ft.; W.O.C.
West Prod. Co. No. 10 W. H. Irwin, W. B. Walker Sur. Drk.
West Prod. Co. No. 1 Minnetex, Wm. Lovett Sur. T.D. 5,943 ft.; P.B. 5,430 ft.; sdtrk. 5,131 ft.; drlg. sh. 6,930 ft.

Pierce Junction—Harris County

Rio Bravo Oil Co. No. 11 fee, B.B.B.&C. Sur. T.D. 1,078 ft., 10¾-in. csg. 1,070 ft.; drlg. sh. 3,459 ft.
Superior Oil Co. No. 2-B Whitehead, Blk. 14, J. Hamilton Sur. Cg. 3,794 ft.

South Houston—Harris County

Stanolind O. & G. Co. No. 1, District No. 11. Derrick.
Stanolind O. & G. Co. No. 5 First National Bank, Callahan and Vince Sur. Drk.
Stanolind O. & G. Co. No. 3 Holland and Price, H.T.&B. Sur. No. 6. Drk.
Stanolind O. & G. Co. No. 1 McKinney, H.T.&B. Sur. No. 6. Drk.
Stanolind O. & G. Co. No. 4 Schwartz, H.T.&B. Sur. No. 6. T.D. 4,000 ft.; 5½-in. csg. 3,963 ft.; I.P. 383 B.P.D. through ¼-in. ck.

Tomball—Harris County

Humble O. & R. Co. No. 4 Hoffman, J. House Sur. T.D. 5,559 ft.; 7-in. csg. 5,584 ft.; I.P. 21 B.P.H. through ¼-in. ck.; T.P. 850 lbs.
Humble O. & R. Co. No. 6 Milo, C. N. Pillott Sur. 10¾-in. csg. 955 ft.; T.D. 960 ft.; drlg. sh. and L. 5,420 ft.
Humble O. & R. Co. No. 1 J. Pruitt Sur. Cg. sh. 5,522 ft.
Humble O. & R. Co. No. 1 Tomball Townsite Unit 4, 10¾-in. csg. 948 ft.; W.O.C.
Shell Pet. Corp. No. 1 Key, Drlg. sh. and L.; T.D. 5,563 ft.; rng. 7-in. csg.

Amelia—Jefferson County

Humble O. & R. Co. No. 1 Phelan, C. Williams Sur. Drk.
Humble O. & R. Co. No. 1 Tyrell Combest, C. Williams Sur. 10¾-in. csg. 1,991 ft.; top sd. 6,735 ft.; 7-in. csg. 6,771 ft.; T.D. 6,779 ft.; deepened to 6,800 ft.; set 5-in. liner; W.O.C.
Glenn H. McCarthy No. 2-A B. M. Long, H. Williams Sur. T.D. 6,105 ft.; comp.; no gauge.
Glenn H. McCarthy No. 1-H Longe, H. Williams Sur. Pits.
Normandie Oil Corp. No 1 G. C. Prutzman, H. Williams Sur. R.U.
Texas Co. No. 1 Yount, A. Houston Sur. 10-in. csg. 1,236 ft.; W.O.C.

Fannett-Jefferson County

Gulf Oil Corp. No. 19 Thomas, W. H. Smith Sur. Drlg. sh. 2,710 ft.

Nome—Jefferson County

Shell Pet. Corp. No. 1 Paggi, J. W. Kirby Sur. T.D. 6,055 ft.; comp.; no gauge.
Sun Oil Co. No. 1 Longe, J. Blair Sur. R.U.
Sun Oil Co. No. 2 Long, John Blair Sur. T.D. 6,057 ft.; comp. after installing christmas tree.

Cleveland—Liberty County

Gulf Oil Corp. No. 3 McDonald, Chas. Smith Sur. Drlg. sd. 5,882 ft.

Hankamer—Liberty County

Gulf Oil Corp. No. 1 Bernice Hankamer, R.U.
Gulf Oil Corp. No. 1 Weaver, A. W. Weaver Sur. Drlg. sh. 5,537 ft.
Gulf Oil Corp. No. 1 J. L. Weaver. Drlg. sh. 4,130 ft.
Uscan Oil Co. No. 5 Ezzell, Levi Barrow Sur. T.D. 5,678 ft.; 7-in. csg. 2,689 ft.; waiting comp. of No. 6.
Uscan Oil Co. No. 6 Ezzell, due south of No. 5 Levi Barrow Sur. T.D. 5,815 ft.; 7-in. csg. 5,765 ft.; PB. 2,627 ft., perf. csg. from 2,600-16 ft.; swbd. dry.

Hull—Liberty County

Gulf Oil Corp. No. 112 Phoenix, J. Devore Sur. T.D. 3,658 ft.; I.P. 153 B.P.D.
Republic Prod. Co. No. 125 Dolbear, J. Devore Sur. Drlg. sh. 2,439 ft.

Esperson—Liberty County

Circle W Oil Co. No. 1 Kay, M. Duncan Sur. Spudded.
General Crude Oil Co. No. 19 Moores Bluff, M. Duncan Sur. Drlg. sdy. sh. 2,211 ft.; T.D. 2,855 ft.; 7-in. csg. 2,838 ft.; drlg. sh. 3,212 ft.

Bay City—Matagorda County

Hamman Expl. Co. No. 1 J. H. Crocker, E. Hall Sur. R.U.

Hawkinsville—Matagorda County

Sun Oil Co. No. 2 Craig, T. Williams Sur. Drlg. rock 733 ft. (cor.).

Markham—Matagorda County

Harrison and Abercrombie No. 9 Kountze, sec. 23. R.U.
Superior Oil Co. No. 1-B Hawks, W. H. Gainer Sur. Drlg. sh. 4,205 ft.

Van Vleck—Matagorda County

McDaniel Drlg. Co. No. 1 C. T. Dye, M. Cummins Sur. R.U.
Skelly Oil Co. No. 11-B Cobb, M. Cummins Sur. R.U.
Skelly Oil Co. No. 9-C Cobb, M. Cummins Sur. T.D. 8,291 ft.; rng. 5½-in. blank liner.

Conroe—Montgomery County

Adeltex Oil Co. No. 1 Lewellen, R. G. Hunter Sur. Drk.
Alpha Pet. Co. No. 26 Falvey, S. Harris Sur. T.D. 5,125 ft.; I.P. 500 B.P.D., ¼-in. ck.
A. U. Morrison No. 2 McComb, L. Smith Sur. 10¾-in. csg. 750 ft.; drlg. sh. 4,839 ft.
Strake Pet. Co. No. 13 Keystone Mills, L. Smith Sur. T.D. 5,020 ft., I.P. 513 B.P.D. through ¼-in. ck.
Strake Pet. Co. No. 14 Keystone-Mills, L. Smith Sur. Drlg. sh. 340 ft.

Orange—Orange County

B. Turnbull No. 1 Lutcher Moore, J. Dyson Sur. Drlg. sh. 4,630 ft.

Greta—Refugio County

Hewitt & Daugherty No. 29 Lambert, Carr & Connell Sur. Cg. 5,730 ft.
Hewitt & Daugherty No. 31 Lambert, Swisher Sur. Cmtd. 7-in. csg. 5,876 ft.
Josey & Bruton No. 2 Lambert, Swisher Sur. T.D. 5,795 ft.; 7-in. csg. 5,774 ft.; I.P. 591 B.P.D. through ¾-in. ck.
United Gas Co. No. 28 Lambert, Hew Sur. T.D. 5,890 ft.; 7-in. csg. 5,866 ft.

Refugio—Refugio County

United Gas Co. No. 16 Heard, Lot 13, Refugio townsite. T.D. 4,925 ft.; testing.
United Gas Co. No. 4 Rea, Lot 1, Block 5, Drlg. 4,439 ft.

Quintana-O'Connor—Refugio County

Quintana Pet. Co. No. 1 Mary C. Bauer, Ximines Sur. Drlg. sh. 5,430 ft.
Quintana Oil Co. No. 4-C O'Connor, G. W. Maine Sur. T.D. 5,929 ft.; comp.; no gauge.
Quintana Oil Co. No. 2 Heard, Ximines Sur. Drk.
Quintana Pet. Co. No. 39-A Tom O'Connor, Swisher Sur. Drlg. sh. 4,939 ft.
Quintana Pet. Co. No. 5-C Tom O'Connor, Swisher Sur. T.D. 5,875 ft.; comp.; no gauge.

Hughes—Victoria County

Portilla Oil Corp. No. 2 P. H. Welder, Felipe Dimmitt Sur., 933 ft. N of No. 1, T.D. 5,010 ft.; 5-in. csg. on bottom.

Placedo—Victoria County

American Liberty Oil Co. No. 2 Cortez, Brownson Sur. R.U.
Barnsdall-American Liberty Oil Co. No. 6 Pickering and Roos, J. M. Brownson Sur. T.D. 4,771 ft.; 7-in. csg. 4,754 ft.
Barnsdall-American Liberty Co. No. 7

Pickering and Foos, S.A.&M.G. Survey. Drlg. sh. 3,290 ft.

Crown Central Oil Co. No. 6 Gebrauer, S.A.&M.G. Sur. 10¾-in. csg. 814 ft. T.D. 4,773 ft.; 7-in. csg. 4,753 ft.; I.P. 65 B.P.D. through 9/64-in. ck.

Harrison & Abercrombie No. 4 Vess, Brownson Sur. T.D. 4,766 ft.; 7-in. csg. 4,746 ft.; testing.

Magnolia Pet. Co. No. 2 Henderson and Pickering, Wm. Rupley Sur. Drlg. sh. 3,000 ft.

E. L. Smith Oil Co. No. 2 E. Boehn, S.A. &M.G. Sur. 10¾-in. csg. 803 ft.; T.D. 4,776 ft.; 7-in. csg. 4,760 ft.; I.P. 20 B. P.D. through ⅛-in. ck.

Westgate Oil Co. No. 4 Mieska, J. M. Brownson Sur. Spudded.

Clay Creek—Washington County

Pompkal et al No. 3 Klatte, S.D. 576 ft.

Sun Oil Co. No. 1 H. Lauter, N. Clay Sur. T.D. 7,454 ft.; 7-in. csg. 7,445 ft.; drlg. plug.; S.D.

Five Corners—Wharton County

Texas Co. No. 1-B Pierce, A. H. Pierce Sur. Drk.

Louise—Wharton County

Pure Oil Co. No. 2 Adams, T. W. Heard Sur. Drk.

Pure Oil Co. No. 1 L. E. Lancaster, M. Cummings Sur. Drlg. sh. 1,970 ft.

Magnet—Wharton County

P. B. Watson No. 1 Sweet, Smith and McKinzie Sur., Lot 4, Blk. 84, S.D.

Pickett Ridge—Wharton County

Texas Crusader, Inc. No. 1 J. F. Kulbela, J. C. Gifford Sur. Drk.

Texas Co. No. 1 A. N. Nilson, Blk. 37, I.&G.N. Sur. Drlg. sh. 2,981 ft.

Texas Co. No. 26-A Pierce, I.&G.N. Sur. No. 38. T.D. 4,708 ft.; 7-in. csg. 4,708 ft.; T.D. 4,713 ft.; rigged up to pump.

Texas Co. No. 27-A Pierce, L.&G.N. Sur. No. 38. T.D. 4,711 ft.; 7-in. csg. 4,705 ft.; rig up to pump.

Texas Co. No. 32-A Pierce, I.&G.N. Sur. No. 38. Drlg. sh. and L. 4,588 ft.

Withers—Wharton County

Texas Co. No. 14-C Withers, John Caldwell Sur. S.D. 37 ft.

Texas Co. No. 12-C Pierce, Wm. Pettus Sur. 10-in. csg. 1,152 ft.; T.D. 4,362 ft.; washing to bottom.

Texas Co. No. 13-C Pierce, John Caldwell Sur. Drlg. sh. and L. 3,967 ft.

GULF COAST WILDCATS

Austin County

W. H. Mitchell et al No. 1 F. Fenner, J. Fitzgibbons Sur. S.D. 2,650 ft.

Brazoria County

Texas Co. No. 1 Robbins, J. W. Brougham Sur. 11¾-in. csg. 4,950 ft.; drlg. sdy. sh. 6,274 ft.

Calhoun County

Benedum & Trees No. 1 Roemer Est., John T. Oggsberry Sur. Drlg. sh. 7,676 ft.

Continental Oil Co. No. 1 Austin Estate, sec. 12, Blk. H, P.B. 8,521 ft.; sdtrkd. 8,471 ft.; drlg. sh. 8,712 ft.

Chambers County

Sun Oil Co. No. 2 Hamilton, J. T. White Sur. 13⅝-in. csg. 1,385 ft.; W.O.C.

Colorado County

Coyle-Concord & Sterling No. 1 Mary E. South, I.&G.N. Sur., sec. 41. 10¾-in. csg. 755 ft.; P.B. to 5,940 ft. to sdtrk.

Galveston County

Shell Pet. Corp. No. 1 Maco Stewart, Spillman Sur. 9⅝-in. csg. 7,707 ft.; T.D. 9,172 ft. sh.; drill pipe stuck; fsg.

Grimes County

Fred Harris No. 1 J. C. Change, Donoho Sur. Drk.

Crook Bros. No. 1 Greer, B. D. O'Conner Sur. Cg. sh. 3,397 ft.

Hardin County

Republic-Houston Oil Co. No. 1 Brooks, T.D. 6,982 ft.; 7-in. csg. 6,953 ft.; blew out; caught fire; cratering; est. 50,000,600 ft. of gas and 2,500-3,000 bbls. of oil well killed with mud, pumped through relief well.

Republic-Houston Oil Co. No. 2 Brooks, G. W. Brooks Sur. (relief well). Cmtd. 7-in. csg. 7,027 ft.; pumping mud into cratered hole.

Harris County

Bunte O. & G. Co. No. 1 Graves, C. Walters Sur. 10-in. csg. 755 ft.; T.D. 6,428 ft.; sd. showing oil and gas; P.B. and sdtrkd. at 310 ft.; drlg. sh. 3,169 ft.

D. B. Cherry et al No. 1 Bert J. Dodge, Josiah Harrell Sur. Spudded.

Stanolind O. & G. Co. No. 1 Angelo Candelari Reels and Trobough Sur. 10¾-in. csg. 1,404 ft.; drlg. sd. 5,748 ft.

Jackson County

Steinberger Pet. Corp. No. 1 Drushel, F. Rodriguez Sur. T.D. 7,155 ft.; P.B. sdtk.; T.D. 7,180 ft.; 7-in. csg. 7,158 ft.; fsg.

Jefferson County

Sun Oil Co. No. 1 Acron, sec. 103. Drlg. sdy. sh. 1,687 ft.

Sun Oil Co. No. 1 J. E. Broussard, W. B. Burton Lge. S.D. 4,236 ft.

Lavaca County

Cole Pet. Co. No. 1 Reed-Nollkamper, A. Smothers Sur. S.D. 2,395 ft.

Liberty County

J. C. Mayo No. 1 K. Moore, J. F. De Romayor Sur. Drlg. sh. 2,330 ft.

Matagorda County

Continental Oil Co. No. 2 Robbins, J. C. Franz Sur. Drk.

Tetts & Harris No. 1 Pierce, Lot 23, W. E. Wallace Sur. Drlg. salt water sand 4,024 ft.

Montgomery County

H. E. Williams No. 1 Peal, Owen Shannon Sur. Drlg. 1,486 ft.

Chapman No. 1 Foster, D. Pevy Hous. Sur. Drk.; spudded.

Polk County

Peyton No. 1 McDonnald, P. J. Menard Sur. Drlg. sh. 1,960 ft.

Refugio County

Tide Water Oil Co. No. 1 Landgarf, J. Collyer Sur. R.U.

Victoria County

Plymouth Oil Co. No. 1 Welder, S.A.&M. S. Sur. No. 153. R.U.

Plymouth Oil Co. No. 1 J. J. Welder, S. A. Balding Sur. T.D. 5,905 ft.; tested 25 lbs. of pressure on drill stem test 5,805-85 ft.

Walker County

W. B. Gossage No. 1 Carey Ld. & Dev. Co., D. M. McDonald Sur. R.U.

Wharton County

Barnett Pet. Co. No. 1 Bard, J. B. Marford Sur. Loc.

Fermont Oil Corp. No. 1 G. Mitchell, D. Wade Sur. Drlg. sh.; showing gas in drlg. mud 6,109 ft.

Pure Oil Co. No. 1 G. A. Duffy, sec. 107, E.G.R.R. Sur. T.D. 6,475 ft.; drill pipe stuck.

Pure Oil Co. No. 1 Topeka Natl. Bank, 160-ac. tr., W. F. York Sur. 10¾-in. csg. 1,460 ft.; drlg. sd. and sh. 5,594 ft.

Texas Crusader Oil Co. No. 1 fee, J. Smith & McKenzie Sur. 10¾-in. csg. 1,234 ft.; 7-in. csg. cmtd. 5,562 ft.; 7-in. cmtd. made squeeze job 5,535-37 ft.; S.D., high water.

Texas Crusader Oil Co. No. 1 Hawes and Neal, S. Castleman Sur. 10¾-in. csg. 975 ft.; S.D., high water.

S. W. TEXAS WILDCATS

Atascosa County

Atascosa Trust No. 1 Domsch, 160 ft. S line, 300 ft. E line, 152-ac. lease, J. T. Russell Sur. 1,222. T.D. 4,010 ft.; D.&A.

Helvetia Oil Co. No. 1 S. Pratt, 1,400 ft. NW line, 3,470 ft. SW line, J. de la Garza Sur. T.D. 3,116 ft.; P.B. 3,000 ft.; drlg. ahead 3,587 ft.

Bastrop County

Paul Teas No. 1 Vinklarek, S. Millet Lge. Drlg. 5,156 ft.

Bee County

W. V. Bowles No. 1 Mengers, W. Allen Sur. T.D. 6,010 ft.; rng. Schlumberger.

L. Glasscock No. 1 Ablinger, SE cor. 110-ac. tr., Ryan Sur. T. abd.; T.D. 820 ft.

Randon Oil Co. No. 1 Handy Bros., J. Tool Sur. Drlg. 4,341 ft.

Sure Oil Co. No. 1 McKinney, J. W. Williamson Sur. D.&A. 4,245 ft.

Bexar County

W. R. Swearingen No. 1 Woefler, ¾ mi. NE Elmendorf. D.&A. 1,671 ft.

Brooks County

Magnolia Pet. Co. No. 1 Lasater, 330 ft. N and W lines, S. Korkill Sur. 440. Loc.

Burleson County

Red Bank Oil Co. No. 1 Grann, 2,875 ft. S line, 1,500 ft. E line, E. Santel Sur. Drlg. in sdtrk. hole 5,097 ft.

Caldwell County

Adams and Lyles No. 1 Dale, W. Spiller Sur. Drlg. 2,060 ft.

Brown Drlg. Co. No. 1 Pope, J. D. Rains Sur. Drlg. 1,637 ft.

John Storey No. 1 Smith, Pablo Martinez Sur. Drlg. 1,631 ft.

Duval County

Benedum & Trees Oil Co. No. 1 Sevier, 1,300 ft. S line, 980 ft. E line tr., Palo Blanquito Sur. Set 10-in. csg. 1,010 ft.; T.D. 1,100 ft.; S.D.

Frank Buttram No. 1 Nueces Land & Livestock Co., 1,350 ft. N line, 1,700 ft. E line, Sur. 102. S.D. 1,919 ft.

Frank Gravis No. 2 Gravis, 3,050 ft. SE line, 990 ft. SW line, Sur. 250. Drlg. 4,129 ft.

Lipscomb & Daubert No. 1 Peters, 330 ft. S line, 1,650 ft. E line, Mitigart Sur. 321. Spudded in; drlg. sh. 1,236 ft.

Shell Pet. Corp. No. 1 Taylor, 330 ft. S and W lines, NW¼, Sur. 214. Set surf. csg. 114 ft.; T.D. 3,156 ft.; D.&A.

Edwards County

Phillip Miers & Turney No. 1 Turney, sec. 164, C.C.S.D.&R.G.N.G. R.R. Sur. S.D. 750 ft.

Plateau Oil Co. No. 1 R. L. Hatch, sec. 66, J. W. May Sur. T.D. 1,240 ft.; S.D., floods.

Goliad County

California Co. No. 1 Langrebe, 465 ft. N and E lines tract, Thomas Hancock Sur. T.D. 5,050 ft.; P.B. 4,859 ft.; tested wtr.; P.B. 4,812 ft.; W.O.C.

Felmont Oil Corp. No. 1 Metz, G. Barrera Sur. T.D. 5,660 ft.; P.B. 3,498 ft.

Sun Oil Co. No. 1 Fromme, A. Martle Sur. Loc.

Gonzales County

M. S. Holliday No. 1 Edwards, W. W. Pace Lge. Loc.

Guadalupe County

Paul Armstrong No. 1 Tiller, J. C. King Sur. Drlg. 1,757 ft.

T. H. Coulter No. 1 Engleke, H. Cottle Sur. S.D.

Chas. Culver No. 1 Vorphal, Geo. Edwards Sur. Drlg. 176 ft.

Long & Ross No. 1 Feltz, Dunn Sur. Drlg. 429 ft.

Hidalgo County

Helen K. Maxwell No. 1 Hidalgo Wtr. Dist. No. 2, Lot 11, Blk. 20. T.D. 731 ft.; S.D.

H. J. Porter No. 1 Sweeny Estate, Lot 1, Wood Subd. No. 2. Drlg. 2,511 ft.

Jim Hogg County

Theo. Hicks No. 1 Kohler, sec. 9, Norias-citas Gr. T.D. 2,430 ft.; S.D.

Locke Purnell and Gifford Oil Co. No. 1 Gallagher, Blk. 128, Pippin Division, Randado Gr. Cg. 3,487 ft.

Henry Swift et al No. 1 Holbien, Blk. 58, sec. 3, Las Animas Gr. Cg. sd. 2,261 ft.

Jim Wells County

Tom Graham No. 1 Bennett, 330 ft. N and W lines, Sec. 76, Lot 87, Sd. 2,343-65 ft.; D.S.T. 280 ft.; P.L.O. and 20 ft. w. water in 15 min.; set csg. and drld. plugs.; washing in.

Gist & Graddy No. 1 Owens, 660 ft. N line, midway F and W lines, Sur. 15[illegible] Set 7-in. csg. 2,340 ft.; T.D. 4,900 ft.; S.D.

Tom Graham No. 1 Luby Estate, Sh. 4, Los Presnos de Abajo Gr. Drlg. 4,019 ft.

E. M. Jones No. 1 Almond, N½, Sur. 7. Spudded in.

La Jita Corp. No. 1 Schallert, 3,919 ft. S line, 2,097 ft. E line tr., Las Presenos Abajo Gr. D.S.T. 5,036-45 ft.; tested dry gas; 500 lbs. W.P. on ¼-in. ck.; cg. sh. 5,177 ft.

Putnam & Stewart No. 1 Canales, C Blk. 32, Mosser Subd., Canales Est. Drlg. 2,607 ft.

Kleberg County

E. B. Clark No. 1 Kivlin, 150 ft. N and E lines, Blk. 8, sec. 39, Kingsville Town & Improvement Subd. T.D. 2,142 ft.; S.C.; S.D.

LaSalle County

W. H. Vernon No. 1 Las Abias ranch, 150 ft. N line, midway E and W lines, sec. 726, S.D. 420 ft.

Live Oak County

Dirks Bros. No. 1 Atkinson, Louis Ayres Sur. S.D. 1,056 ft.

J. H. Durbin No. 4 Marbach, S. Hays Sur. T.D. 902 ft.; set. 6⅝-in. csg. 896 ft.; W.O.C.

R. Feltner No. 1 Sanger, 990 ft. S line, 330 ft. W line, E½, Sur. 391. Spudded.

Loma Oil Co. No. 2 Palmer, 150 ft. NW line, 1,800 ft. NE line tr., Sparks Sur. Drlg. 417 ft.

O. W. Killam No. 1 Schultz Live Stock Co., 1,320 ft. S line, 640-ac. tr., 150 ft. W of highway, Hefferman Sur. Drlg 2,072 ft.

Maryland Oil Co. No. 1 Geo. West Est., Lot 399, James Vaughn Sur. R.U.

Sun Oil Co. No. 1 James, Pat McGlover Sur. Loc.

Maverick County

Rio Dev. Co. No. 1 Winchester Kelson, 150 ft. W line, 750 ft. S line, E½, 130-ac. tr. Set csg. 660 ft.; W.O.C.

McMullen County

L. D. Armsby No. 9 Griffith, 650 ft. N line, 150 ft. NE of No. 8. R.U.

F. R. Floyd et al No. 1 Plaserk, 150 ft. N and E lines, Blk. 2, Garner Sur. T.D. 1,200 ft.; prep. to perf.

Hagen Stewart Oil Co. No. 1 Kunz, M. Hely Sur. Drlg. 807 ft.

R. H. Hill No. 1-A Richardson, Sur. 158, S.D. 2,780 ft.

C. I. Jennings No. 1 Regan, 1,070 ft. S Frio River, 330 ft. W line, 642-a. tr., Haley Gr. S.D. 1,026 ft.

F. W. Nute No. 1 Fehler, 700 ft. W line, 570 ft. S line, 250-ac. tr., Byrne-Pittrick Grants. Loc.

Geo. Pickett No. 1 Fisher, 2,400 ft. SE line, 11,400 ft. SW line, John Garner Sur. Set sur. csg. 63 ft.; W.O.C.

I. Taylor No. 1 Lark, 150 ft. S and W lines, Lot 72, Scrugham Sur. T.D. 973 ft.; T.D. 600 ft.; stdg.

Medina County

N. C. Johnson No. 1 Taylor, 360 ft. E line, 168 ft. S line, 320-ac. tr., Castro Sur. 136. T.D. 400 ft.; S.D.

G. N. Witting No. 1 Hondo Natl. Farm Loan Assn., Geo. Studer Sur. 214. T.D. 1,505 ft.; D.&A.

Nueces County

Barnsdall Oil Co. No. 1 Weil, Lot 5, McBride Partition, Cg. 4,761 ft.

Bunte O. & G. Co. and Woodley Pet. Co. No. 1 Cain, sec. 4, Kinney Subd. T.D. 4,865 ft.; rng. Schlumberger.

O. W. Killam No. 1 Sevier, 330 ft. S and W lines, sec. 112, Pauls Subd., Driscoll ranch. Spdg.

San Patricio County

Eleanor Oil Co. No. 1 Kline, Lot 5, Blk. "C," Coleman-Fulton Pasture Subd. T.D. 6,650 ft.; drld. cmt.; cleaning hole.

Eleanor Oil Co. No. 1 W. W. Toland, sec. 15, Blk. A, Coleman-Fulton Pasture Subd. M.I.M.

Starr County

J. F. Anderson No. 1 Yzaglerre, Tr. 1, Porc. 79, J. of Camargo, T.D. 2,910 ft.; S.D.; repairs.

H. L. Bass No. 1 Haden, 3,740 ft. S line, 555 ft. W line, Sh. 47, Porc. 80. Spudded; S.D.

Bennett & Lowe No. 1 Guerra, 330 ft. SW line, 250 ft. NW line, sec. 293. T.D. 2,500 ft.; T. abd.

F. Davenport No. 1 Kelsey-Bass, 534 ft. S line, N 585-ac. tr., 2,856 ft. E line, Porc. 87. Set 1,000 ft. of surf. csg. Drlg. sh. 3,612 ft.

Davenport-Slick-Urschel No. 1 Slick Est. Davenport ranch, sec. 485. Sd. 3,837-55 ft.; S.O. to test.

Double D Oil Co. No. 1 Kelsey-Bass, N½, Porc. 87. Cg. 3,919 ft.

Leach & Mallott No. 2 Dana Est., Porc. 84, 2,100 ft. Rio Grande River. M.I.M.

South Coast Oil Co. No. 1 Isabel Lopez, Sh. 40-B, Porc. 80. M.I.M.

Sun Oil Co. No. 1 Orr, 330 ft. N and W lines, Porc. 103. Loc.

Webb County

Mid-Continent Pet. Corp. and Oklahoma Co. of Texas No. 1 Laubscher, 330 ft. NE and NW lines, NW¼, sec. 1,394, Cg. 2,193 ft.

Ivan Howard No. 1 Frost Nat. Bank, Sur. 733. Drlg. 1,463 ft.

Lu-Tex Oil Co. No. 1 Lone Star, Porc. 12, (W.O.). Fsg. 2,317 ft.

Sackett & Keoghan No. 1 Wilmot, W. 640-ac. tr., Sur. 201. Drlg. 1,017 ft.

Zapata County

Gilcrease Oil Co. No. 1 Trevino, Blk. 5, sec. 3, Porcs. 2 and 3. Drlg. 1,721 ft.

Hill & Hill No. 1 Alexander, Porc. 25, T.D. 2,606 ft.; to D.D.

S. W. TEXAS PROVEN

McCampbell—Aransas-San Patricio Counties

Atlantic Oil Prod. Co. No. 1 McCampbell, 330 ft. NE and NW lines, Lot 8, Blk. 41, Subd. 4. Drlg. 1,821 ft.

J. Nelson No. 1 Riggs, 330 ft. NW line, 213 ft. SW line, 6.46-ac. tr., Trs. 12 and 13, Blk. 16. Loc.

Foley—Bee County

L. Glasscock No. 1 Strickland, 330 ft. W line, 485 ft. S line, C. Hodge Sur. M. I.M.

Siznod Oil Corp. No. 1 Holzmark, 330 ft. W line, 990 ft. S line, 20-ac. tr., May Sur. D.S.T. 4,082-4,101 ft.; 40 ft. oil and mud; W.P. 25 lbs., ¼-in. ck.; rng. csg.

Plummer—Bee County

D. R. Semmes No. 1 Plummer, 450 ft. S and E lines, 40-ac. tr., Blk. 33, Chessman Sur. 144. Cg. 3,002 ft.

Voss—Bee County

Devonian Oil Co. No. 2 Voss, 660 ft. N No. 1, S. May Sur. Drlg. 2,807 ft.

Humble O. & R. Co. No. 1 Page, Pilkington Sur. T.D. 4,061 ft.; D.&A.

Humble O. & R. Co. No. 1 Wm. Voss, 330 ft. SW line, 990 ft. NW line, 101-ac. tr. Sd. 3,985-89 ft.; tested 200 ft. oil, 5 ft. wtr. in 16-min. D.S.T.; set csg.; W.O.C.

Alta Mesa—Brooks County

California Co. No. 1 Mestina, 4,840 ft. N line, 4,185 ft. E line, B. Garcia tr. No. 5. Loc.

Alta Verde—Brooks County

Dick Young No. 5 Singer, Blk. 12, Sur. 312. Drlg. 507 ft.

Salt Flat—Caldwell County

Chiquita Oil Co. No. 2 Hickman, G. Hinds Sur. 2,608 ft.; comp. est. 15 B.P.D.

Colmena—Duval County

Conservative Oil Co. No. 1 Sun-D.C.R.C., 1,650 ft. NW line, 330 ft. SW line, NE¼ Sur. 51. Comp. 40 B.P.D. on pump.

Conservative Oil Co. No. 3 D.C.R.C., N½, Blk. 17, Sur. 53. Set csg. on sd. 1,496-99 ft.; W.O.C.

El Mesquite—Duval County

Rogers & Rogers No. 1 Valdez, 150 ft. NE and SE lines, 80-ac. tr., Mesquite Gr. Sd. 2,939-49 ft.; tstd dry; T.D. 3,500 ft.; P.B. 2,900 ft.; D.&A.

Government Wells—Duval County

Govt. Wells Oil Co. No. 21 Lundell, Sur. 60. Drlg. 2,063 ft.

Magnolia Pet. Co. No. 10 Johnson, Sur. 44. Drlg. 582 ft.

Magnolia Pet. Co. No. 11 Johnson, Sur. 44. Sd. 2,325-30 ft.; comp. 40 B.P.D.

Southwest Prod. Co. No. 18 Wendt, SE¼, sec. 43. Sd. 2,385-90 ft.; attempting comp.

Hoffman—Duval County

Bridwell Oil Co. No. 3 Sutherland, Sd. 2,701-36 ft.; comp. 10 B.P.H.; T.D. 2,738 ft.

Rogers & Rogers No. 7 Hoffman, Sur. 118. No report.

Kohler—Duval County

Humble O. & R. Co. No. 51 Kohler, 330 ft. S line, 1,650 ft. E line, Sur. 171. R.U.

Labbe—Duval County

Mills Bennett Prod. Co. and Stanolind C. & G. Co. No. 2 Yates, 330 ft. N and E lines, sec. 3, M.I.M.

Stanolind and Mills Bennett No. 1 Yates, 2,149 ft. S line, 2,800 ft. W line, sec. 560. 2,438-41 ft.; set csg.; S.D.

Loma Novia—Duval County

Bridwell Oil Co. No. 14 Wm. Hubbard, Sur. 71. T.D. 2,550 ft.; testing sd.

Humble O. & R. Co. No. 55-B Hubbard, Sur. 52. T.D. 2,770 ft.; comp. 264 B.P.D.

Humble O. & R. Co. No. 56-B Hubbard, Sur. 52. Drlg. 2,027 ft.

Humble O. & R. Co. No. 17 Ruiz, sec. 553. Comp. 290 B.P.D.; T.D. 2,769 ft.

Humble O. & R. Co. No. 15 Vela, Sur. 42. Sd. 2,756-70 ft.; comp. 15.7 B.P.H.

Magnolia Pet. Co. No. 45 Hahl, Sur. 67. Comp. gasser; T.D. 2,716 ft.; C.P. 710 lbs.

Magnolia Pet. Co. No. 46 Hahl, Sur. 67. Drlg. 1,697 ft.

Pitkin & Goldston No. 4 Breeding, Sur. 57. T.D. 2,585 ft.; comp. 65 B.P.D.

Pitken & Goldston No. 5 B.C.C., Sur. 57. Comp. 60 B.P.D.; T.D. 2,595 ft.

Reynosa Oil Co. No. 8 Hubbard, Sur. 75. Comp. 12 B.P.H.; T.D. 2,566 ft.

Rosan Oil Co. No. 1-B Hubbard, Sur. 71. Sd. 2,775-93 ft.; comp. 20 B.P.H.

Rosan Oil Co. No. 4 Welder, SW¼, Sur. 71. Drlg. 1,041 ft.

Shell Pet. Corp. No. 10 Hubbard, Sur. 74 Drk.; M.I.M.

Shell Pet. Corp. No. 17 Mendoza, Sur. 68. Sd. 2,729-36 ft.; testing.

Shell Pet. Corp. No. 18 Mendoza, Sur. 68. R.U.

Texas Co. No. 17 Bishop Duval, sec. 57. Comp. 60 B.P.D. on pump; T.D. 2,574 ft.

Wilson & Leach No. 1 Wright, Sur. 72. T.D. 2,580 ft.; stdg. with oil in hole.

Loma Vista—Duval County

Pan American Pet. Co. No. 1-H Welder, 330 ft. N and W lines, 160-ac. tr., Sur. 103. T.D. 3,006 ft.; hole bridged at 1,-000 ft.; C.O.

Shell Pet. Corp. No. 1-B Welder, 330 ft. S line, 2,590 ft. W line, Sur. 69. T.D. 3,242 ft.; P.B. 2,867 ft.; W.O. orders.

Peters—Duval County

Tom Graham No. 2 Sutherland, Sur. 188. D.&A. 2,713 ft.

Windsor Oil Co. No. 4-B Peters, 660 ft. N No. 3-B, 330 ft. E line, sec. 34. Sd. 2,585-2,601 ft.; testing.

Seven Sisters—Duval County

Atlantic Ref. Co. No. 9-E Welder, Sur. 102. Comp. 18 B.P.H. on ⅜-in. ck.; T.D. 2,-444 ft.

Atlantic Oil Prod. Co. No. 10-E Welder, Sur. 381. Sd. 2,413-27 ft.; comp. 73 B. P.D. on ¼-in. ck.

Atlantic Ref. Co. No. 11-E Welder, Sur. 381. Spudded in.

Harvey & Henderson No. 1 Welder, Sur. 102. Spudding.

Humble O. & R. Co. No. 27 Smith, Sur. 382. Sd. 2,440-56 ft.; comp. 24 B.P.H.; T.D. 2,457 ft.

Humble O. & R. Co. No. 28 Smith, Sur. 382. Comp. 42 B.P.H. on ½-in. ck.; T.D. 2,567 ft.

Humble O. & R. Co. No. 29 Smith, Sur. 382. T.D. 2,437 ft.; testing.

Humble O. & R. Co. No. 12 Wright, Sur. 118. Sd. 2,513-19 ft.; comp. on pump; no gauge.

Humble O. & R. Co. No. 13 Wright, Sur. 118. Testing 2,531 ft.

Illinois Pet. Co. No. 9 Hazelwood, Sur. 110. Sd. 2,208-20 ft.; set csg.; S.D.

Magnolia Pet. Co. No. 3 Neely, Sur. 220. T.D.; sd. 2,519 ft.; set csg.; W.O.C.

Pan American Prod. Co. No. 2-B Welder, Sur. 381. T.D. 2,486 ft.; comp. 240 B. P.D.

Reliance Oil & Royalty Co. No. 11 Drummond, Sur. 308. T.D. 2,500 ft.; D.&A.

Wellington Oil Co. of Del. (Santa Clara) No. 10-B Welder, Sur. 381. Drlg. 2,006 ft.

Wellington Oil Co. of Del. (Santa Clara) No. 3-D Welder, Sur. 381 Comp. 8.92 B.P.H. on ¼-in. ck.; sd. 2,373-92 ft.

Westheimer & Daube No. 18 Campos, Sur 224. T.D. 2,779 ft.; S.D.; W.O.O.

North Pettus—Goliad County

Bostex Oil Co. No. 1 Lackey, 1,650 ft. NW line, J. Gomez Sur., 1,660 ft. SW of No. 3-A. T.D. 3,833 ft.; comp. est. 100 B. P.D.

Jane Oil Co. No. 11 Mudd, B.&B. Sur. Set sur. csg. 248 ft.; W.O.C.

Mercedes—Hidalgo County

Union Sulphur Co. No. 10 American Rio Grande L. & I. Co., Blk. 50, Tr. 2.418. N. Caprisallo Dist. Cg. sh. 8,253 ft.

Mestanas—Hidalgo County

Pantana Pet. Co. No. 1 Harding, Lot 11, Blk. 94, Missouri-Kansas L. & I. Co., Subd. Mestanos Gr. Sd. 6,590-6,640 ft.; odor oil and gas; drlg. hd. sh. 7,716 ft.

Samfordyce—Hidalgo County

Gem Oil Co. No. 3-A Seabury, Tr. 256, Porc. 38. Spudded.

Henshaw Bros. No. 1 Guerra, Tr. 250, Porc. 39. Comp. 100 B.P.D. on ¼-in. ck.; T.D. 2,980 ft.

Herrison-Danvers No. 1 Guerra, Tr. 251, Porc. 38. Cg. 2,684 ft.; sd.

Harrison and Danvers No. 2-A Villalon, Tr. 252, Porc. 39. R.U.

Henshaw Bros. No. 2 Yturria, Tr. "B," E½ Porc. 100. Fsg. 1,050 ft.

Colorado—Jim Hogg County

J. H. Meek No. 2 A. Martinez, Lot 3, Sur. 623. Sd. 2,986½-95½ ft.; 15-min. D.S.T. 2,936-3,009 ft.; 15 ft. oil and mud; no W.P.; T.D. 3,052 ft.; rng. Schlumberger.

Heune-Winch-Fariss—Jim Hogg County

Sam Payne No. 1 Holbien, 150 ft. N and W lines, Blk. 10, Share 3, Las Animas Gr. R.U.

Bentonville—Jim Wells County

La Jita Corp. No. 1 Frame Bowers, 330 ft. N and E lines, sec. 14. Sd. 5,338-40 ft.; drlg. plugs.

Lagita Corp. No. 2 Pope, SE¼, sec. 20. Drlg. 4,617 ft.

Lucas—Live Oak County

Houston Oil Co. No. 36 Cartwright, 808 ft. E of No. 35. P.B. 2,099 ft.; comp. gasser 2,083-93 ft.

Calliham—McMullen County

Agarita Oil Co. No. 3 Lark, Blk. 56, Scrugham Sur. Set csg. 948 ft.; T.D. 953 ft.; comp. 95 B.P.D. on pump.

Loma Oil Co. No. 8-F Jacob, 100-ac. lse., Faddin Sur. Comp. 20 B.P.D. on pump; sd. 917-22 ft.

Agua Dulce—Nueces County

Texon Drlg. Co. No. 1 Austin, Sh. 2, Chapman Subd. D.S.T. 5,675-80 ft.; recovered 400 ft. oil; W.P. 100 lbs.; set csg.; W. O.C.

Texon Royalty Co. No. 1 Elliff, 466 ft. E line, 2,194 ft. S line tr., Longorio grant. T.D. 6,557 ft.; T.A.

Texon Drlg. Co. No. 1 McCoy, Sh. 1, Palo Alto Part. Cg. 4,807 ft.

Clara Driscoll—Nueces County

W. D. Hines No. 1 Sevier, 280 ft. S and E lines, W½, sec. 60. Drlg. 3,211 ft.

Hiram Reed No. 2 Roper, C Lot 1, Blk. E. Driscoll townsite. Set csg. 4,000 ft.; drlg. plugs.

Wellington Oil Co. of Del. (Santa Clara) No. 1-A Sevier, Wm. Gamale Sur. Sd. 3,810-17 ft.; D.S.T. 2,000 ft. oil in 15 min.; set csg.; attempting comp.

Flour Bluff—Nueces County

Barnsdall Oil Co. and Flour Bluff Corp. No. 2 Phillips, C Lot 12, sec. 55. Sd. 6,629-45 ft.; set csg.; drlg. plugs.

Costa Oil Co. No. 1 Henderson, 530 ft. E line, 660 ft. S line, Lot 10, sec. 48. Sd. 6,595-6,642 ft.; S.O.; set csg.; W.O.C.

Gem Oil Co. No. 2 Smith, sec. 47. M. I.M.

Humble O. & R. Co. No. 1 Edwards, C Lot 24, Blk. 48. M.I. rig.

Humble O. & R. Co. No. 2 Phillips, C Lot 2, Blk. 48. M.I. rig.

Humble O. & R. Co. No. 1 Rankin, C Lot 27, Blk. 47. R.U.

Humble O. & R. Co. No. 1 Robertson, C Lot 23, Blk. 47. R.U.

S. Paul No. 1 Moulter, Blk. 16, sec. 41, Encinal Garden tracts. Loc.

Saxet Heights—Nueces County

Booth et al No. 1 Wilson Realty Co., cen. Lot 28, Country Club Place. Set sur. csg.; W.O.C.

Cox No. 2 Priour, Blk. 12, Bancroft Farm Lots. Sd. 4,068-73 ft.; comp. 125 B.P.D. on ¼-in. ck.

J. K. Culton No. 7 Baldwin, 250 ft. S, 125 ft. W, Republic No. 5-B. Sd. 4,075-93 ft.; set csg.; W.O.C.

J. A. Lavender, No. 1 Long, C 1-ac. tr., Blk. 3, Ellendale Gardens No. 3. T.D. 4,062 ft.; S.D.

C. P. McGrew No. 2 Kelly, 19.3-ac. tr. Set sur. csg.; W.O.C.

Morgan Bros. No. 2 Bender, Blk. C, Harbor View Estates. T.D. 4,085 ft.; failed to flow; S.D.

W. N. Paul No. 2 Schallert, cen. Blk. "C," Harbor View Addn. S.D. 1,800 ft.; W.O.

Pedernal Oil Co. No. 1 John, Blk. 14, Oak Park Addn. S.D. 4,110 ft.; orders.

Pedernal Oil Co. No. 1 McCaughan, cen. Plk. 17, Oak Park Addn. Set surf. csg. 500 ft.; no report.

Port O. & G. Co. No. 1 Corpus Christi College, 39.6-ac. tr. Sd. 4,070-86 ft.; set csg. 4,086 ft.; drlg. plugs.

Port O. & G. Co. No. 6 Gibson, Blk. D, Harbor View Est. Sd. 4,057-67 ft.; set csg. 4,067 ft.; W.O.C.

Power Prod. Co. No. 1 Savage, cen. 1-ac. tr., Country Club Addn. Drk.

J. D. Proctor No. 1 Simonton, 100 ft. E line, 68 ft. N line, 1-ac. tr., Lots 46 and 47, Country Club Pl. Sd. 4,070½-83 ft.; set csg.; W.O.C.

H. M. Reed No. 2 Priour, Blk. 12, Bancroft Farm Lots. Comp.; no gauge; sd. 4,068-73 ft.

Renwar Oil Corp. and Maryland Corp. No. 1 Guaranty Title & Trust Co., Lot 9, Blk. 12, Villa Gardens. Comp. est. 100 B.P.D.; sd. 4,074-79 ft.

Rico Oil Co. No. 1 Whelan, 9.3-ac. tr., Villareal grant. Comp. 92 B.P.D. on 3/16-in. ck.; sd. 4,068-75 ft.

Saxet O. & G. Co. No. 1 Edwards, 32-ac. tr. S.D. 4,073-79 ft.; set csg. 4,080 ft.; W.O.C.

Taylor Pet. Co. No. 1 Incarnate Word Academy, 40-ac. tr., Villareal Sur. Sd. 4,044-63 ft.; set csg. 4,045 ft.; W.O.C.

W. A. R. Oil Co. No. 1 Dunn, 53-ac. tr., Villareal Sur. R.U.

Sam Wilson No. 1 Blucher, Lot 19, Blk. 2, Oak Park Addn. R.U.

Saxet—Nueces County

C. Anchade No. 2 Frank, 28.3-ac. tr., Sur. 416. M.I.M.

R. B. Bryant No. 3 Frank, Sh. C, Sur. 416. T. sd. 5,832 ft.; comp. 168 B.P.D. on ¼-in. ck.; T.D. 5,837 ft.

R. B. Bryant No. 4 Frank, 330 ft. N and W lines, 40-ac. tr., Sur. 416. Set su csg. 1,100 ft.; W.O.C.

R. B. Bryant No. 2 Scoggins, 20-ac. tr., Sur. 316. Sd. 4,569-72 ft.; comp. 132 B. P.D. on 3/16-in. ck.

R. B. Bryant No. 3 Scoggin, 20-ac. tr., Sur. 316. Skidding on.

Conroe Drlg. Co. No. 6 Bliss, 80-ac. tr., Stevens Sur. Sd. 5,814½-31 ft.; comp. 12 B.P.H. on 3/16-in. ck.

Conroe Drlg. Co. No. 7 Bliss, 330 ft. N and E lines, 80-ac. tr. Set sur. csg.; W.O.C.

Glasscock No. 2 Johns, Sur. 582. Comp. no gauge; sd. 5,800-19 ft.

Great States Oil Co. and Violet Oil Co. No. 2 McGregor-Belk, Sur. 311. Drlg. 3,872 ft.

Great States Oil Co. and Violet Oil Co. No. 4 McGregor-Belk, Sur. 311. Drlg. 4,353 ft.

Hiawatha Oil Co. No. 1 Hutchins-Stillwell, 175 ft. W line, 1,200 ft. S line, Sur. 311. Stdg. 4,257 ft.

Hiawatha Oil Co. No. 3-A Smith, Blk. 35, Sheppard Farm Lots. M.I.M.

Hiawatha Oil Co. No. 1-B Smith, Sur. 311. T.D. 5,896 ft.; recmtg.

Holliday Oil Co. No. 5 Griffith, 330 ft. N line, 2,424 ft. E line, 100-ac. tr., Frank Sur. Sd. 5,813-40 ft.; set csg.; W.O.C.

Howell & Hawkins No. 1 Page Bros., 50-ac. lease, Sur. 416. T.D. 6,713 ft.; rng. Schlumberger.

Houston Oil Co. No. 2-A fee, 23.6-ac. tr. Set sur. csg. 1,296 ft.; W.O.C.

Houston Oil Co. No. 5-A Harrell, 660 ft. S of No. 3-A, Blk. 19, Sheppard Farm Lots. Sd. 4,532-40 ft.; drld. plugs; completing.

Houston Oil Co. No. 7 McGregor, Sur. 311. Sd. 5,791-5,831 ft.; comp. 200 B.P.D. on 9/64-in. ck.

Houston Oil Co. No. 8 McGregor, 135-ac. tr., Sur. 582. Drlg. 3,262 ft.

Magnolia Pet. Co. No. 3 Walton, Villareal Sur. Cg. 4,882 ft.

Maryland Oil Corp. No. 2 Rand Morgan, 330 ft. N line, 990 ft. W line, 234-ac. tr., Sur. 315. Sd. 4,562-75 ft.; set csg. 4,575 ft.; W.O.C.

North Star Oil Co. No. 3-G Morgan, B.S. &F. Sur. Sd. 5,799-5,815 ft.; set csg.; W.O.C.

Oso Drillers, Inc., No. 4 Roark, 660 ft. E line, 1,200 ft. S line, 106-ac. tr. R.U.

Pan American Prod. Co. No. 3-C Morgan, Sur. 405. Sd. 5,786-5,820 ft.; comp.; no gauge.

Pan American Prod. Co. No. 1-D Morgan, SW¼, Sur. 405. Sd. 4,723-28 ft.; test failed; drlg. 4,921 ft.

Pan American Prod. Co. No. 2-D Morgan, SW¼, Sur. 405. Set csg. 4,101 ft.; comp. 139 B.P.D. on 5/32-in. ck.

Pan American Prod. Co. No. 1-A Sagarin, O.E.I.D.&M. Sur. Sd. 5,821-39 ft.; comp. 185 B.P.D. on 3/32-in. ck.

Pan American Prod. Co. No. 2-A Sagarin, 1,000 ft. W line, 330 ft. N line, 89.57-ac. tr. M.I.M.

Phillips Pet. Co. No. 4 Morgan, 193 ft. W line, 330 ft. S line, 60-ac. tr., Sur. 405. Stdg. 3,813 ft.

Phillips Pet. Co. No. 5 Morgan, 60-ac. tr. E½, SE¼, sec. 405. Sd. 5,895-5,936 ft.; rng. electrical survey.

Renwar Oil Corp. No. 2 R. Morgan, 990 ft. W line, 330 ft. N line, 80-ac. lse., Sur. 315. Comp. 131 B.P.D. on ¼-in. ck.; sd. 4,548-66 ft.

Republic Nat. Gas Co. No. 5-B Baldwin, Blk. 19. T.D. 4,086 ft.; running csg.

Republic Nat. Gas Co. No. 14 Dunn, Blk. 37, Sheppard Farm Lots. Spudded.

Richardson Pet. Co. No. 2 Quiros, Blk. 40, Sheppard Farm Tr. (W.O.). P.B.T.D. 4,-798 ft.; old T.D. 4,879 ft.; M.I.M.

Rusto Drlg. Co. No. 2 Harmon, 20-ac. tr., Sur. 416. Set sur. csg. 1,130 ft.; W.O.C.

Southern Minerals Corp. No. 14 Bliss, 120-ac. tr., Stevens Sur. Sd. 5,817-29 ft.; fsg.

Southern Minerals Corp. No. 16 Bliss, 120-ac. tr., Stevens Sur. Sd. 5,823-38 ft.; comp. 133 B.P.D. on ¼-in. ck.

Southern Minerals Corp. No. 18 Bliss, 120-ac. tr., Stevens Sur. Cg. 5,787 ft.

Southern Minerals Corp. No. 6 Isensee, 330 ft. N line, 990 ft. W line, 235-ac. tr., C. Land Sur. 404. Drlg. 6,412 ft.

Southern Minerals Corp. No. 7 Ocker, 202-ac. tr., Land Sud. Set csg. 4,868 ft.; W. O.C.

Southern Minerals Corp. No. 1 Till, 990 ft. S line, midway E and W lines, 52.6-ac. tr., Page Lands Sur. Drlg. 612 ft.

Texon Drilling Co. No. 2 Isensee, 150 ft N line, 112 ft. W line, 13.44-ac. tr., C. Land Sur. 404. Spudded.

Texon Drlg. Co. No. 3 McElroy, 40-ac. tr., Thos. Gallagher Sur. Set sur. csg.; W. O.C.

Texon Drlg. Co. No. 1 Ocker, Sur. 404. Sd. 4,434-43 ft.; set csg.; W.O.C.

W.A.R. Oil Co. No. 1 Buckholt, Lot 4, Buckholt Partition. Set csg.; T.D. 4,585 ft.; W.O.C.

Wynne Drlg. Co. and Coker No. 2 Morgan, 160-ac. tr., G.S.&F. Sur. Sd. 4,560-67 ft.; S.D.

Wynne & Coker No. 1 Morgan, 160-ac. tr., Sur. 315. Drlg. sh. 5,523 ft.

Plymouth—San Patricio County

Centennial Oil Co. No. 2 State of Texas, Tr. 3, sec. 48. Drlg. 5,622 ft.

Magnolia Pet. Co. No. 9 C. C. Banks, Fessendon & Hunter Sur. Drlg. 3,892 ft.

Plymouth Oil Co. No. 61-C Welder, sec. 49 T.D. 4,988 ft.; fsg.

Plymouth Oil Co. No. 62-C Welder, sec. 71. M.I.M.

Plymouth Oil Co. No. 64-C Welder, sec. 71, set surf. csg. 383 ft.; S.D.

Sun Oil Co. No. 3 Rosson, Lot 2, Sec. 35. Drlg. 2,831 ft.

Sun Oil Co. No. 2 Rountree, Blk. 34. Sd. 5,640-58 ft.; swbg. oil and S.W.

Taft Field—San Patricio County

Atlantic Oil Prod. Co. No. 1 Pullin, 40-ac. tr., Lot 4, Blk. 1, 2nd Addn. Loc.

Cage Prod. Co. No. 4 Mayo, 63-ac. tr., Ottman Sur. Sd. 4,929 ft.; comp. 110 B. P.D. on ¼-in. ck.

Conroe Drlg. Co. No. 3 Pullin, 44.41-ac. tr., sec. 1, Second Addn. Sd. 4,069-83 ft. comp. 19 B.P.H. on ¼-in. ck.

Conroe Drlg. Co. No. 5 Pullin, Lot 4, sec. 1. M.I.M.

Humble O. & R. Co. No. 7 Mayo, 150 ft. S and E lines, 640-ac. tr., Ottman Sur. Drk.

Humble O. & R. Co. No. 8 Mayo, Wm. Burns Sur. T.D. 3,980 ft.; comp. est. 500 B.P.D. on 3/16-in. ck.

Humble O. & R. Co. No. 9 Mayo, 640-ac. tr., Ottman Sur. R.U.

Humble O. & R. Co. No. 10 Mayo, Wm. Burns Sur. T.D. 4,907 ft.; reworking.

Shell Pet. Corp. No. 4 Pullin, Lot 1, Blk. 4, Second Addn. Drlg. 4,927 ft.

White Point—San Patricio County

Earl Calloway No. 1 White Point Dev. Co., 330 ft. E line, midway N and S lines, G. Seguin Sur. No. 5. T.D. 6,512 ft.; P.B. 4,900 ft. to test sd. 4,900-15 ft.

Margo—Starr County

A. A. Kelly No. 1 Gonzales, Sh. 62, Porc. 71. Sd. 346-49½ ft.; tested gas; cg. 383 ft.

J. W. Richards No. 1 Garcia, Sh. 7-B, Porc. 71. Loc.

Rio Grande City—Starr County

Sam Adams No. 1 Garza, Sh. 20-A, Porc. 80. Drlg. 466 ft.

Coreta Oil Co. No. 5 Doyno, Blk. 1, Tr. 77-A, Porc. 81. Spudded.

Fech Oil Co. No. 1 Davis, 150 ft. S and W lines, Blk. 15, Tr. 78, Porc. 8. Sd. 1,395-1,400 ft.; attempting comp. on pump.

Moss & Bass No. 3 Doyno, Blk. 3, Tr. 77-A, Porc. 81. Drlg. 516 ft.

Santo Domingo—Starr County

John Clopton No. 4 Roos & Bennett, 330 ft. S and W lines, Blk. 5, Porcs. 91-92. Drlg. 2,987 ft.

Carolina-Texas—Webb County

E. J. Sawyer No. 2 Webster, 330 ft. S line, 1,980 ft. W line, Sur. 684. S.D. 2,600 ft.

Cole—Webb County

L. H. Sexton No. 1 R. Benavides, Blk. 4, Sur. 22, Cole Subd. Drlg. 561 ft.

Lopez—Webb-Duval Counties

Cox & Hamon No. 7 Peal, Sur. 795. Rng. csg. 2,185 ft.

Cox & Hamon No. 4 Peters, Sur. 327. Drlg. 1,793 ft.

C. H. Lewis No. 8 Lopez, Sur. 110. Cg. 2,117 ft.

Magnolia Pet. Co. No. 14 Peal, Sur. 383. Sd. 2,111-21 ft.; comp. 15 B.P.H.; T.D. 2,125 ft.

Magnolia Pet. Co. No. 16 Peal, Sur. 383. Sd. 2,159-64 ft.; set csg.; W.O.C.

Magnolia Pet. Co. No. 17 Peal, Sur. 383, Sd. 2,096-2,118 ft.; set csg.; W.O.C.

Mills Bennett Prod. Co. No. 5 M. Lopez, Sur. 73. T.D. 2,221 ft.; comp. 480 B.P.D.

Mills Bennett Prod. Co. No. 8 M. Lopez, Sur. 73. M.I.M.

Mortimer & Springer No. 4 J. Lopez, Sh. 10-B, Sur. 73, Set csg. 2,193 ft.; W.O.C.

Mills Bennett Prod. Co. No. 3 Montemayor, Sur. 114. R.U.

Mortimer & Springer No. 5 Paula Vela, Sur. 114. Drlg. 527 ft.

Mortimer & Springer No. 5-B Peal, NW¼ Sur. 796. Comp. 480 B.P.D.; T.D. 2,-177 ft.

Superior Oil Co. No. 10 Billings, Sur. 109. Drk.

Superior Oil Co. No. 1 Kirkpatrick, Sur. 18. T.D. 2,000 ft.; D.&A.

O'Hern—Webb County

Hamill & Smith No. 9 Benavides, Blk. 435, Hale Subd. Sd. 2,943 ft.; set csg.; W. O.C.

Hamill & Smith No. 10 Benavides, Hale Subd. R.U.

Hamill & Smith No. 31 Benavides, Blk. 497, Hale Subd. Drlg. 1,516 ft.

Magnolia Pet. Co. No. 41 Benavides, Hale Subd. Set csg. 2,751 ft.; comp. 35 B.P.D.

Magnolia Pet. Co. No. 12 Seacord-Benavides, Blk. 5, Hale Subd. Drlg. 882 ft.

H. J. Porter et al No. 2 S. Benavides, Blk. 386, Hale Subd. Cg. 2,914 ft.

H. M. Reed No. 3 S. Benavides, Blk. 247, Hale Subd. Cg. 2,938 ft.

Starr Dev. Co. No. 1 Benavides, 330 ft. N and W lines, Sur. 173. M.I.M.

Escobas—Zapata County

Texas Co. No. 93 Whitehead, Tr. 1-D, Cerrito Blanco Gr. Drlg. 2,039 ft.

Haynes—Zapata County

Clover C. & G. Co. No. 23 Haynes, Blk. 7, Haynes Subd. Comp. 50 B.P.D.; T.D. 977 ft.

Gilcrease Oil Co. No. 8-B Haynes, Blk. 4, Haynes Subd. Comp. 15 B.P.D.; T.D. 991 ft.

Gilcrease Oil Co. No. 4-C Haynes, Blk. 8, Haynes Subd. Comp. 25 B.P.D.; T.D. 998 ft.

McKay & Upchurch No. 11 Haynes, Sur. 7. Comp. 30 B.P.D.; T.D. 1,003 ft.

Mid-Continent Pet. Corp. No. 6 Haynes, Blk. 8, Haynes Subd. R.U.

Nordan & Morris No. 12-A Haynes, Blk. 7, Haynes Subd. Set csg. on sd.; T.D. 1,071 ft.; comp. 65 B.P.D.

Nordan & Morris No. 13-A Haynes, Blk. 7, Haynes Subd. Comp. 50 B.P.D.; T.D. 1,064 ft.

Nordan & Morris No. 14-A Haynes, Blk. 7, Haynes Subd. M.I.M.

E. C. TEXAS WILDCATS

Anderson County

Neversuch Oil Co. No. 1 John Adams, Long Lake field. S.D. 2,121 ft.

Angelina County

T. L. Harris et al No. 2 fee, 450 ft. E and 290 ft. W of 75-ac. tr., 50 ft. W of No. 1 1½ mi. NE of Huntington, Eli Gilliland Sur. Drlg. 415 ft.

C. D. Neff No. 1 Long Bell Lbr. Co., J. F. Gilbert Sur., 6½ mi. NW of Huntington. Drlg. 1,348 ft.

W. A. Stone et al 1 Southern Pine Lbr Co., B. J. Thompson Sur., 8 mi. SE Lufkin. Drk.

Cherokee County

J. G. Mayo No. 1 W. T. James, J. T. Jones Sur. Top Pecan Gap 3,896 ft. Drlg. 4,250 ft.

A. F. Richardson No. 1 F. P. O'Brien, 330 ft. N and W of 167-ac. tr. in G. S. Clapp Sur., 3 mi. NW of Rusk. 5,000-ft. test. Loc.

Falls County

R. M. Hefflin No. 1 T. E. Battle, Marl Sur., 3 mi. SW of Marlin. Top Austin 1,325 ft. S.D. 1,406 ft.

Thirteen O. Co. No. 1 H. R. Roberts, 380 varas from E. of westerly W. line and 265 varas from N line of 1.42-ac. tr. in N. Slatter Sur., 6 mi. SE of Lott. M.I.M.

Fannin County

S. W. Ball No. 1 A. G. Byers, 300 ft. N of Schrivner No. 1 Parkhurst, in W. Pailey Sur., 5 mi. N of Leonard. Drlg. 115 ft.

Freestone County

Yancey et al No. 1 Scott, Church Lot, H. Awalt Sur. W of Stewartsville. S.D. 1,500 ft.

Red Lake Oil Co. No. 1 M. Wheeler, J. Aguilera Sur. Drlg. 255 ft.

Henderson County

McDougal et al No. 1 E. Price, M. Mathews Sur., 4 mi. S of Trinidad. S.D. 50 ft.

Sparks et al No. 1 Berry, Young Sur., 5 mi. S of Brownsville. O.W.; to deepen.

Hunt County

Penn Oil Corp. et al No. 1 A. B. Manning, 5 mi. NE of Lone Oak, S. Owens Sur. Drk.

Kaufman County

Lester & Duffield No. 1 D. C. Baron, J. T. Taylor Sur., 8 mi. NE of Elmo. Fshg. 5,968 ft.

Nacogdoches County

J. C. Bonhan et al No. 1 Angelina Lbr Co., in J. Gomez Sur., 14 mi. SE of Nacogdoches, R.U.

Collier et al No. 1 A. T. Mast, T. J. Lambert Sur. Loc.

Navarro County

Ed Bateman et al No. 1 S. P. Love, Base Austin 1,525 ft., top Woodbine 1,918 ft., Georgetown 2,270 ft. Drlg. 2,570 ft.

Red River County

Abercrombie & Harrison No. 4 Southern Pine Lbr. Co., D. D. Bruton Sur., 1,500 ft. N of No. 3. Drlg. 1,926 ft.

F. D. Jones et al No. 1 Monkhouse, John Ware Sur. Cg. 1,175 ft.

M. Petroff et al No. 1 R. G. Morris, J. Guest Sur., 2 mi. W of Detroit. S.D. 20 ft.

E. Sneed et al No. 1 Hocker-Hughes. S.D. 2,720 ft.

Robertson County

J. E. Mills No. 1 T. Congelosi, C of 75-ac. tr. in G. A. Nixon Sur., 3½ mi. SW of Hearne. Washing 1,832 ft.

Rusk County

John W. Merritt No. 1 J. A. Stallings, T. Uzzell Sur., 2½ mi. S of East Texas field. S.D. 1,920 ft.

Smith County

Carolyn et al No. 1 Bennett, Robt. Walters Sur., 3 mi. NE of Winona. Top Pecan 3,325 ft., Base 3,660 ft. Drlg. 4,628 ft.

Upshur County

B. L. Watson No. 1 W. O. Irwin, D. Cannon Sur., NE cor. of county. Drk.

Wood County

G. W. Nix et al No. 1 E. A. Russell, J. Delap Sur., SW cor. of county. Drk.

EAST TEXAS

(Border Counties)

Bowie County

Woodley & Bentley No. 1 Lumpkin, J. McDermott Sur. S.D. 3,570 ft.

Cass County

American Liberty No. 1 Dawson et al, on Dawson tr., J. H. Rives Sur. 10-in. set 1,922 ft.

American Liberty No. 1 Sheppard, J. H. Rives Sur. Drlg. 3,384 ft.

American Liberty No. 1 J. Wiley, SE cor. 58.86-ac. tr., J. Davenport Sur. Loc.

Bay Oil Co. No. 1 G. E. Parker, SE cor. Greenham Sur. Drlg. 3,475 ft.

Gulf Prod. Co. No. 1 Dawson et al, NE cor. of tr., J. H. Rives Sur. Drlg. 850 ft.

Herman L. Brown No. 7 R. P. Willis, Robt. Trammel Sur. 7-in 6,040 ft. T.D. 6,073 ft. W.O.C.S.

H. L. Hunt No. 1 I.N.&C.L. Shelton, SE cor. 202-ac. tr., J. Davenport Sur. Drlg. 120 ft.

W. F. Lacey et al No. 2 Baughs, J. H. Rives Sur. Cg. 5,965 ft.

Magnolia Pet. Co. No. 2 J. E. George, NE cor. John Collum Sur. 7-in. 6,008 ft. T.D. 6,078 ft. W.O.C.S.

Magnolia Pet. Co. No. 3 J. E. George, SW cor. John Collum Sur. 7-in. 6,073 ft. T.D. 6,129 ft. W.O.C.S.

Magnolia Pet. Co. No. 4 J. E. George, NE cor. 141-ac. lse., John Collum Sur. Drlg. 5,450 ft.

Magnolia No. 5 J. E. George, SW cor. John Collum Sur. Drlg. 1,150 ft.

Magnolia No. 6 J. E. George, SW cor. John Collum Sur. 16-in. set 240 ft. W.O.C.S.

Magnolia No. 7 J. E. George, SE cor. John Collum Sur. Loc.

Magnolia No. 8 J. E. George, SE cor. John Collum Sur. Loc.

Magnolia No. 1 Meda Green, SW cor. J. Davenport Sur. Drk.

Magnolia No. 2 Meda Green, SW cor. J. Davenport Sur. Drlg. 250 ft.

Magnolia No. 4 Meda Green, on Jesse Baugus 60-ac. tr., J. Davenport Sur. Loc.

Magnolia No. 8 A. S. Hall, SE cor. James Young Sur. Loc.

Magnolia Pet. Co. No. 4 Haywood, SW cor. Haywood Tr., John Collum Sur. Fsg. D.S. 5,960 ft.

Magnolia Pet. Co. No. 1 J. J. Moore, J. Collom Sur., 330 ft. N, 418 ft. W. SE cor. 118-ac. tr. Swabbed S.W. 6,051 ft. F.B. to 6,025 and perf. and testing.

Magnolia No. 1 Noel Estate, NE cor. Wm. B. Hughes Sur. Drlg. 260 ft.

Magnolia Pet. Co. No. 5 Rives, SE cor. John Collum Sur. Drlg. 4,323 ft.

Magnolia No. 6 Rives, SW cor. 425-ac. tr., Robert Trammel Sur. Drlg. 1,990 ft.

Magnolia No. 7 Rives, NE cor. John Collum Sur. Loc.

Magnolia No. 8 Rives, NE cor. John Collum Sur. Loc.

Magnolia No. 9 Rives, NE cor. John Collum Sur. Loc.

Marathon Oil Co. No. 2 R. P. Willis, 1,039 St. S of No 1, S.F.I.W. Sur. Comp. Flw. 20 B.P.H. ¼-in. tb. ck. T.D. 5,984 ft.

Marathon Oil Co. No. 3 R. P. Willis, 660 ft. S of Superior A-1 Chew, S.F.I.W. Sur. Fsg. for bit 5,975 ft.

R. W. Norton No. 3 A. S. Hall, NW cor. E. E. Hill 60-ac., John Collum Sur. Flw. 15 bbls. 6 hrs.; T.D. 6,097 ft., W.O.

R. W. Norton No. 2 J. T. Moore, 940 ft. W of No. 1, Wm. R. Myers Sur. Drlg. 2,145 ft.

Ohio Oil Co. No. 4 R. P. Willis, S.F.I.W. Sur. Drlg. 210 ft.

Ohio Oil Co. No. 5 R. P. Willis, S.F.I.W. No. 1263 Sur. Loc.

Ohio Oil Co. No. 6 R. P. Willis, 1,226 ft. SE of No. 2, S.F.I.W. No. 1263 Sur. R.U.

Ohio Oil Co. No. 7 R. P. Willis, S.F.I.W. No. 1263 Sur. Loc.

Ohio Oil Co. No. 10 R. P. Willis, 933 ft. S of No. 4, S.F.I.W. No. 1263 Sur. Drk.

Phillips Pet. Co. No. 1 G. E. George, Wm. R. Myers Sur. R.U.

Phillips Pet. Co. No. 1 Skinner, Hutchinson tr., S.F.I.W. No. 1025 Sur. Loc.

Phillips Pet. Co. No. 2 Skinner, Hutchinson tr., S.F.I.W. No. 1025 Sur. Loc.

Phillips Pet. Co. No. 1 Wartzbaugh, Robt. Trammel Sur., 431 ft. S of N line and 430 ft. W of E line. Drlg. 5,714 ft.

Phillips Pet. Co. No. 2 Wartzbaugh, Robt. Trammel Sur. 134 ft S of N line and 496 ft. W of E line. Drlg. 5,910 ft.

Phillips Pet. Co. No. 3 Wartzbaugh, 438 ft. N and midway between E and W line of lse., Robt. Trammel Sur. Drlg. 3,476 ft.

Showers & Moncrief No. 5 T.H. and Sallie Stalcup, Robt. Trammel Sur. 16-in. set 240 ft.

Showers & Moncrief No. 6 T. D. and Sallie Stalcup, Robt. Trammel Sur., 330 ft. S and 1,338 ft. W line, Loc.

Showers & Moncrief No. 8 T. D. and Sallie Stalcup, Robt. Trammel Sur., midway between E and W line of lse. Loc.

Superior Oil Co. No. A-3 Chew, Robt. Trammel Sur., 1,399 ft. N 486 ft. W. SE cor. 108-ac. tr. Comp., flw. 519 bbls. 24 hrs. ½-in. tb. ck. T.D. 5,987 ft.

Superior Oil No. 5-A Chew. W.D.&C.C Track, Robt. Trammel Sur. Stg. crooked hole. T.D. 2,900 ft.

Superior Oil No. 6-A. SW cor. Chew tr., Robt. Trammel Sur. 7-in. set 5,967 ft. T.D. 5,988 ft.; W.O.C.S.

Texas Co. No. 2 E. E. Hall, SW cor. 60-ac. tr., James Young Sur. Comp., flw. 40 B.P.H., ½-in. tb. ck. T.D. 6,087 ft.

Texas Co. No. 1 W. M. Hall, A. Archer Sur. Drlg. 3,238 ft.

Tide Water No. 1 W. D. Chew, Robt. Trammel Sur., 150 ft. N of S line, midway between E and W lines of 20-ac. lease. Derrick.

Tide Water No. 1 W. D. Chew, on 55-ac. tr., Robt Trammel Sur. Drlg. 5,887 ft.

Tide Water No. 2 C. C. Chew, Robt. Trammel Sur., 20-ac. tr. 7-in. cmt. 5,964 ft. T.D. 5,977 ft.; W.O.C.S.

Tide Water No. 2 C. C. Chew, on 55-ac. tr., Robt Trammel Sur. R.U.

United Prod. Co. No. 3 J. R. Jones, Ben J. Murray Sur. Loc.

United Gas No. 4 J. R. Jones, 502 ft. N, 3,120 ft. W. SE cor. Ben J. Murray Sur. 7-in. cmt. 6,008 ft. T.D. 6,050 ft.; W.O.C.S.

United Gas No. 5 J. R. Jones on 18-ac. tr., John Collum Sur. Cg. 5,990 ft.

United Prod. Co. No. 4 F. S. Simpson, on 160-ac. tr., James Young Sur. Drlg. 5,900 ft.

United Prod. Co. No. 7 J. T. Stewart, M. Stewart 49-ac. lse., John Collum Sur. Loc.

United Prod. Co. No. 1-A J. T. Wall, Alex Archer Sur. on Wall 82 ac. tr. Drlg. 4,264 ft.

United Prod. Co. No. 2-A J. T. Wall, Alex Archer Sur. on Wall 82-ac. tr. Drlg. 3,075 ft.

Harrison County

W. F. Bridewell et al No. 1 Clapp, F. C. Baker Sur. T.D. 5,167 ft; S.D.

Geyer Oil Co. No. 2-A Vincent, S. B. Harrison Sur. Drlg. 1,650 ft. chalk.

Hanover, Bergendoll et al No. 1 Buchanan, Wm. McIlvain Sur. Drlg. 4,125 ft., cor. depth.

Panola County

Danciger O. & R. Corp. No. 1 Tatum, SW cor. A. Bissell Sur. Digging pits. Loc.

A. C. Glassell No. 1 Frost Lbr. Industries, SW cor. Mary S. Potts Sur. Drlg. 5,967 ft.

Gulf Oil Corp. No. 1 Pierce & Chesbro, J. H. Shahan Sur. Drlg. 5,138 ft.

Logansport P. L. Corp. No. 1 Rushing & Smith Sur. Show 2,582-2,600 ft.; T.D. 2,710 ft.; S.D.

Magnolia Pet. Co. No. 1 E. A. Hull, T. Applewhite Sur. R.U.

Sabine County

L. D. House et al No. 1 Bell, McDonnell Sur. Cg. 2,032 ft.

Shelby County

F. E. Mulroy et al No. 1 C. A. Hayden, in the D.T.F. York Sur. Fsg. 2,200 ft.

Potter & Rubeling & H. Polly No. 1, Wm. Wisner Sur. T.D. 4,050 ft.; M.I.H.R.

Red Wing Oil Co. No. 1 C. H. Herton, 54-ac. tr. in J. Dowlin Sur. S.D. 1,186 ft., cor. depth.

NORTH TEXAS WILDCATS

Archer County

Archer Drlg. Co. No. 1 A. L. Harris, Blk. 60, Harris Subd. Location.

Archer Drlg. Co. No. 1 L. F. Wilson, sec. 32, A.T.N.C.L. Sur. Loc.

Clark & Mayfield No. 1 W. H. Taylor, sec. 17, A.T.N.C.L. Sur. Loc.

W. W. Houston No. 1 P. J. Forcher, sec. 13, H.&T.C. Sur. Loc.

Luggenheim et al No. 1 W. T. Waggoner, sec. 3, H.&T.C. Sur. S.D. weather, 1,310 ft.

Rathke Oil Co., No. 1 G. P. Meade, sec. 39, "L.&M." pasture. Drlg. 705 ft.

Clay County

Alexander & Goldsmith No. 1 Byers & Co., sec. 28, Byers Subd. Drk.

Collin County

California Consld. Oil Co. No. 1 Fagg, Jas. Rutherford Sur. Spud and S.D.; wtr.

Port Bolivar O. & R. Co. No. 1 Durning, Wm. Creegar Sur. S.D. 4,065 ft.

Port Bolivar O. & R. Co. No. 1 A. Sherley, G. Starke Sur. Loc.

Sorrell et al No. 1 D. R. Clark, J. Rowland Sur. Drk.

Cooke County

Big Indian O. & D. Co. No. 1 T. E. McFadden, G. M. Bonds Sur. A-69. Drlg. 400 ft.

Cain & Chandler No. 1 J. B. Burch, J. M. Williams Sur. A-658. S.D. 1,956 ft.

R. W. Fails No. 2 Powell, Wm. McClelland Sur. A-752. Drlg. plug.

Gratz & Wilson No. 1 Dennis, S. Hernandez Sur. A-437. Drlg. 190 ft.

B. H. Hilburn No. 1 W. A. Harris, J. Harris Sur. A-502. Drlg. 425.

Long & Wolf No. 1 Hopkins, B.B.B.&C. Sur. A-150. Drlg. 1,350 ft.

C. Newburn No. 1 P. G. Dotson, W. Campbell Sur. A-238. S.D.O. 1,957 ft.

Reed et al No. 1 V. D. Randall, J. Redman Sur. Bailing.

E. R. Robison No. 1 J. Krebs, H. Wilkey Sur. A-1,090. S.D. 2,130 ft.

Ruwaldt-Couch No. 1 Stacy, J. Clark A-194. Drlg. 1,100 ft.

Sinclair Prairie Oil Co. et al No. 2 A. C. McCall, H. White Sur. A-1,134. Drlg. 5,392 ft.

Skelly Oil Co. No. 1 Field & Bowers, J. Dye Sur. A-140. Drlg. 378 ft.

Denton County

Manning & Moore No. 1 E. L. Darnell, T. Walters Sur. A-1,329. Swbd. salt wtr. and trace oil 2,505-12 ft.

Grayson County

Olson et al No. 1 D. R. Uitger, P. P. Cady Sur. A-301. R.U.R.

Pete Shaner No. 1 Blair, R. H. Deaver Sur. A-313. S.D. 2,000 ft.; repairs.

Jack County

Bryson O. & G. Co. No. 1 O. Loving, T.& N.O. Sur. A-852. Drk.

W. H. Hammon No. 1 G. E. Evett, L. Plaster Sur. Drlg. 1,825 ft.

Harper Pet. Corp. No. 1 G. F. Brown, S. M. Holderness Sur. A-1,532. S.D. 1,700 ft.

L. A. Long No. 1 Smith, S.P.R.R. Sur. A-552. Drlg. 2,365 ft.

States Oil Corp. No. 1 J. Lowe, J. Hudson Sur. A-256. S.S.O. 3,293-3,305 ft.; testing.

Joe A. Worsham No. 1 Lowe, S. Crook Sur. A-148. T.D. 3,135 ft.; S.D.O.

Montague County

H. Bost No. 1 Lemon, S. Little A-417. Machine on ground.

Clark-Beckner No. 1 C. W. Bell, sec. 4, M.E.P.&P. Sur. Drk.

T. P. Frost No. 1 Johnson, sec. 6, E.T. R.R. Spudded and S.D.

W. E. Halbert No. 1 Petty, S. A. Southerland A-992. Spud. and S.D.

L. C. Heydrick No. 1 Cliff Dowd, G. W. Browning Sur. A-1,274. Spud. & S.D.

Jim Seeds et al No. 1 Coomba, sec. 55, M.E.P.&P. Sur. S.D.O. 2,340 ft.

Thompson et al No. 1 John W. Holmes, Jas. B. Miller Sur. A-461. Drlg. 1,610 ft.

Wichita County

A. E. Blair No. 1 Cody Est., sec. 311, Waggoner Col. Subd. R.U.R.

Melat & Graham No. 1 Munger, Blk. 26, K.W.V.F.V. Sur. Drlg. 3,730 ft.

G. H. Howell No. 1 Foster, sec. 1, H.T. &B. Sur., 900 ft. S.D. water

J. M. Morton No. 1 Housler, J. C. Pike, A-509 S.D. 3,142 ft.

Wilbarger County

Fain McGaha No. 2 N. N. Waggoner, sec. 37, H.&T.C. Sur., Blk. 4. Drlg. 1,910 ft.

F. A. Lain No. 1 Mrs. D. Coffee, sec. 44, H.&T.C. Sur., Blk. 15. Drlg. 1,570 ft.

Young County

Alexander & Long No. 1 Goldston, S.P.R.R. Sur. A-263. Drk.

S. Caprito No. 1 Mrs. N. Laquey, A. Irvin Sur. A-1,779. Drlg. 3,750 ft.

Art Cox No. 1 J. T. Rogers, J. Ray D. 1,628. Drlg. gas sd. 4,008-11 ft.

W. D. Eastland No. 1 A. R. Manning, T.& &L. Sur. 3,412. Drlg. 2,720 ft.; O.S. 2,727-40 ft.; 200 ft. oil in hole; C.O. and testing.

Hinson & Tidwell No. 1 Jeffery, T.E.&L. Sur., sec. 467. Drlg. 1,450 ft.

Rathke Oil Co. No. 1 O. W. Hill, J. C. Graham Sur. A-122. Drlg. 3,962 ft. This test is going to deeper pay and will produce from two sands.

Yorktex Pet. Co. No. 1 F. G. Burnett, G. W. Hills Sur. A-151. Drlg. 3,630 ft.

WEST TEXAS WILDCATS

Andrews County

Grisham Hunter Corp. No. 1 Ratliff & Bedford. S.D. 3,518 ft.

R. H. Henderson No. 1 J. E. Parker, sec. 25, P.S.L. Sur. A-43. Drlg. 3,800 ft.

Borden County

Moore Bros. No. 1 Clayton-Johnson, sec. 20, Blk. 32, Twp. 4n, T.&P. Sur. Top Yates 1,660 ft.; top salt 1,175 ft.; fish. 2,375 ft.

Brewster County

F. C. Dodson No. 1 Texas American Synd. sec. 66, Blk. 10, G.H.&S.A. Sur. T.D. 3,690 ft.; to set pipe.

Toney Hess No. 1 Mary Deal, sec. 7, Blk. 1, G.T.R.R. Sur., 7 mi. NW of Marathon. S.D. 1,630 ft.

Cochran County

Cascade and Honolulu Oil Corp. No. 1 B. B. Duggan, cen. Labour 13, League 54 Oldham County Sch. Ld. S.D. 5,038 ft.; 1,200 ft. oil in hole; pay 5,020 ft.

Coke County

H. E. Ogden No. 1 E. C. Rawlins, 330 ft. from S and W. Sec. 391, Blk. 1-A, H.& T.C. Sur., 4 mi. N and 1 mi. W of Bronte. Loc.

Crane County

Gulf Oil Corp. No. 2 W. N. Waddell, sec. 18, Blk. B-21. T.D. 6,265 ft.; to ream hole.

Gulf Oil Corp. No. 2 McKnight, sec. 9, Blk. B-21. Fsg. 3,633 ft.

Loffland Bros. No. 2 Tubbs, sec. 9, B-37. S.D. 4,628 ft. for storage.

Moore Bros. No. 1 Barnsley, sec. 43, Blk. 32, P.S.L. Sur. Drlg. 5,735 ft.

Dawson County

Roy Albaugh et al No. 1 J. Robinson, T.D. 4,971 ft.; no increase in oil; S.D.O.; may acidize.

Ector County

Continental Oil Co. No. 1 Edwards, sec. 32, Blk. 44, T.&P. Sur. Drlg. 3,212 ft.

Empire G. & F. Co. No. 1-C Cummins, sec. 22, Blk. 45, Twp. 1n, T.&P. Sur. T.D. 3,920 ft.; to underream.

Sinclair Prairie No. 1-A Johnson, sec. 42, Blk. 42, Twp. 1s, T.&P. Sur. Drlg. 4,275 ft.

Stanolind O. & G. Co. No. 2-B Cowden, sec. 10, Blk. 43, Twp. 2s, T.&P. Sur. S.D. 3,895 ft.; 2,000,000 ft. gas.

York & Harper No. 1 Slater, sec. 26, Blk. 45, Twp 1s, T.&P. Sur. Drlg. 3,972 ft.

York & Harper No. 1 York. Drlg. 3,880 ft.

Edwards County

M. I. Phillips & Miers No. 1 Turney, sec. 164, C.C.S.D.&R.G.N.G. Sur. Drlg. 746 ft.

Plateau Oil Co. No. 1 Hatch, C SE SW¼ sec. 66, Blk. B, H.E.&W.T. Sur. S.D. 1,242 ft.

Fisher County

L. A. Daniels et al No. 1 J. J. Nickless S.D. 1,175 ft.

Ellis & Eubanks No. 1 C. C. Wourland, sec. 15, Blk. 21, T.&P. Sur. T.D. 3,309 ft.; S.D. 3,440 ft.

Forest Dev. Co. No. 1 A. M. Dry, sec. 108, Blk. 2, H.&T.C. Sur. S.C. 4,347-50 ft.; to test.

Gaines County

Amerada Pet. Corp. No. 1-A Averitt, sec. 228, Blk. G, W.T.R.R. Sur. S.D. 2,890 ft.

Garza County

Gartex Oil Co. No. 2 Post Est., sec. 6, Blk. 5, K. Aycock Sur. S.D. 2,377 ft.; set csg.

Glasscock County

California-Honolulu Oil Corp. No. 1 Calverley, sec. 25, Blk. 35, Twp. 3s, T.&P. Sur. S.D. 2,855 ft.

F. Dodson et al No. 1 Carter heirs, sec. 5, Blk. 33, Twp. 3s, T.&P. Sur. T.D. 2,665 ft.; P.B. 2,664 ft.; to acidize.

Hockley County

Texas Co. No. 1 B. Slaughter, Labour 33, League 38, Zavala Co. Sch. Lds. Fsg. 2,910 ft.

Hudspeth County

Wayman Krupp Oil & Land Co. No. 1

Thaxton, sec. 34, Blk. 74, Twp. 6, T.&P Sur. S.D. 1,476 ft.

Jones County

Camp & Grady No. 1 Woodson. S.D. 1,908 ft.

R. B. Ferris et al No. 1 Guitar, trustee, sec. 44, Blk. 15, T.&P. Sur., 1 mi. NE of Hawley. S.D. 1,780 ft.

P. E. Glenn No. 1 Carlton, Subd. 26, McMullen & McGloin Sur. Pits.

J. L. Reeves No. 1 Kelly, C. Martinez Sur., 1½ mi. N of Hawley. Drlg. 1,302 ft.

Kimble County

Wilcox O. & G. Co. No. 1 H. Spiller, sec. 15, Brooks & Burleson Sur., Abst. 80. T.D. 2,430 ft.; to set csg.

Loving County

W. L. Pickens et al No. 1 Lewright, 660 ft N and E, sec. 1, Blk. C-37, P.S.L. Sur. Loc.

Pecos County

Aero O. & G. Co. No. 1 Bloydes, sec. 50, Blk. 10, H.&G.N. Sur. S.D. 1,400 ft.

Anderson Oil Co. No. 1 White & Baker, sec. 32, Blk. Z, T.C. Sur. T.D. 1,240 ft.; drlg plug

C. A. Everitt No. 1 W. C. Tyrell, sec. 508, G. Montez & Duran Sur. Drlg. 700 ft.

A. H. Flaherty No. 1 Cunningham, 2,310 ft. from S and 330 ft. from W, sec. 25, Blk. 11, H.&G.N. Sur. R.U. machine.

Kirk et al No. 1 Potts, sec. 6, Blk. 9, H.& G.N. Sur. Drlg. 460 ft.

E. K. Minshall, No. 1 Banker, sec. 25, Blk. 146, T.&St.L. Sur. Drlg. 2,426 ft.

Tex-Mex Oil Co. No. 1 McKee, Tr. 7, sec. 24, Blk. 9, H.&G.N. Sur. Set csg.; drlg. 2,553 ft.

S. Thompson No. 1 Elsinore Cattle Co., sec. 54, Blk. D, G.C.&S.F. Sur. T.D. 3,650 ft.; cmtg. csg.

Trans-Pecos Oil Co. No. 2 Caldwell, sec. 27, Blk. 50, T.&P. Sur. Drlg. 323 ft.

Presidio County

Lindeman Bros. Oil Corp. No. 1 J. R. Bledsoe & Badgley, sec. 15, Blk. 351, G.C.&S.F. R.R. Co. Sur., 2¼ mil. NE of Presidio. T.D. 1,660 ft.; C.O. 20 ft. off bottom.

Schleicher County

Magnus Oil Co. No. 1 Judkins & Spencer, C SW¼ sec. 4, W. W. Russell, grantee. Elev. 2,209 ft.; S.G. 4,350 ft.; gas sd. 4,956-58 ft.; T.D. 6,527 ft.; P.B to 5,779 ft.; S.D.

Terrell County

Ohio Oil Co. No. 1 M. H. Goode, sec. 26, Blk. 161, G.C.&S.F. Sur. O.T.D. 6,120 ft.; preparing to deepen to Ordovician; R.U. rotary.

Terry County

J. A. Estes No. 1 F. B. Graham, sec. 28, Blk. T, O.&W.R.R. Sur. S.D. 70 ft.

Ucan Oil Co. No. 1 Brownfield, C N¼ sec. 54, Blk. K, P.S.L. Sur. T.D. 3,634 ft.; W.O.C.

Tom Green County

Webb Bros. No. 1 J. F. Schriver, 150 ft. from N and W of Krending Sur. 1,663, 3 mi. N and E of Van Court. S.D. 70 ft.

Upton County

R. H. Henderson No. 1 Reese, sec. 16, Blk. 3½, C.C.S.D.&R.G.N.G. Sur. Skd. rig 25 ft. N; drlg. 125 ft.

Ward County

P. Moran et al No. 1 Reynolds, sec. 13, Blk. 5, H.&T.C. Sur. S.D. 850 ft.

Philtop O. & G. Co. No. 1 Pure-Smith, sec. 26, Blk. 34, H.&T.C. Sur. Drlg. 2,382 ft.

C. H. Mahres No. 1 P. Wilson. Drlg. 2,120 ft.

Prince Bros. Drlg. Co. No. 1 Monroe, sec. 52, Blk. 34, H.&T.C. Sur. Fsg. 2,667 ft.

Texas Pacific C. & O. Co. et al No. 1 Buckner Orphans Home Lands, sec. 3, Blk. 32, H.&T.C. Sur. Drlg. 2,031 ft.

Winkler County

Emperor Oil Co. No. 1 Cross, sec. 4, Blk. B-11, P.S.L. Sur. R.U. machine.

Bert Fields et al No. 1 Walton, sec. 3, Blk C-23. Testing at 3,155 ft.

Read & Duffey No. 1 Sealey, sec. 8, Blk. A, G.M.M.B.&A. Sur. Drlg. 2,831 ft.

Texas Co. No. 1 Halley, sec. 7, Blk. B-11, P.S.L. Sur. T.D. 3,499 ft.; P.B. 3,195 ft.; shot; testing.

Yoakum County

Texas Pacific Coal & Oil Co. No. 1 Bennett, 660 ft. N and 1,980 ft. W, sec. 678, John H. Gibson Sur. Rotary.

California Fields

(Continued from Page 75)

fortnight. No. 16 Erburu, a recent completion, has been shut in and at present is showing a casing pressure of 870 pounds. General Petroleum has spudded No. 17 Barnard in the Ventura Avenue field. It is scheduled for completion in the deep 57 zone discovered by Associated Oil Co. a few years ago. In the meantime General Petroleum is redrilling No. 13 Notten at 8,970 feet with the bottom of the hole at 9,510 feet.

Three good wells were completed in the Mount Poso field during the week and a check of drilling under way indicates the probable completion of several more within the next 10 days. Shell No. 29 Vedder, bottomed at 1,844 feet and finished with an 8⅝-inch water string landed and cemented at 1,665 feet, pumped 648 bbls. of clean 16.7 gravity oil per day. Union Oil Co. extended the limits of production in the southern end of the Mount Poso field by completing No. 1-B Tribe in section 28-27-28 pumping 518 bbls. of 15.7 gravity oil daily from 1,908 feet after the hole had been finished with a 6⅝-inch liner including 71 feet of perforated. Vanguard Oil Co. No. 5 Baker, another new well finished in the Mount Poso field, showed an initial daily production of 346 bbls. of relatively clean 16.3 gravity oil from 1,900 feet after the hole had been finished with a 6⅝-inch liner carrying 23 feet of perforated. This new well is located in section 33-27-28 and preparations have already been started to spud in No. 6 Baker in the immediate future.

Mountain View

Barnsdall Oil Co. completed No. 1 Nighbert in the Mountain View field in section 19-30-29, producing 351 bbls. of relatively clean 26.1 gravity oil per day from 4,878 feet after the hole had been plugged back from 4,972 feet and finished with a 5¾-inch liner carrying 116 feet of perforated. Mohawk Oil Co. has recompleted No. 4 Hood after redrilling and deepening to 5,998 feet, and it is pumping 151 bbls. per day.

In the Kettleman North Dome field Kenda completed No. 38-18-J doing 1,789 bbls. of clean 32.1 gravity oil per day on a gas lift from 8,911 feet and brought No. 51-2-P on production flowing 678 bbls. of clean 33.1 gravity oil and 7,200,000 feet of gas per day from 7,755 feet. In the Lost Hills field of Kern County Associated Oil Co. finished another good well in the shallow zone opened up a few months ago and at the present rate of development this section will soon become quite active. Associated's new producer was No. 4 Williamson, in section 2-26-20, which showed an initial production of 460 bbls. of 14.2 gravity oil from 1,750 feet.

All wells completed in the shallow zones in the northwest end of the Lost Hills field have been finished on the beam. Associated Oil Co. is starting two new wells in this area and Lincoln Petroleum Co. and the Texas Co. will increase their scope of work if they succeed in getting commercial production as now appears quite probable.

Two small pumpers were chalked up in the west front district of the Kern River field but operators should make up for lost time within the next fortnight as there are several new wells nearing the completion stage. Vega Oil Co. No. 2 in section 11-28-27 was good for only 80 bbls. of 14.3 gravity oil per day upon completion at 2,222 feet. Associated No. 41 in section 23-28-27 was even smaller as it was good for only 20 bbls. daily from 1,953 feet. The latter well seems to be increasing and may show much larger production. St. Helens Petroleum Co. completed a small well in the older section of the Montebello field, No. 21 Monterey, which was brought in pumping 48 bbls. of 23.1 gravity oil and 150 bbls. of water per day from 3,728 feet. St. Helens is drilling two additional wells on this property.

In the Long Beach field the Texas Co. recompleted No. 2 Brown after cleaning out the hole to bottom 5,032 feet and returned it to production pumping 197 bbls. of unusually clean 24.8 gravity oil daily. West American Oil Co. No. 13 W. A. in the East Coyote field is now on steady production pumping 120 bbls. daily from 5,850 feet after the hole had been plugged back from 6,430 feet. In the Dominguez field Union Oil Co. completed No. 49 Callender making 230 bbls. daily on a compressor following the conclusion of drilling operations at 5,441 feet. Associated Oil Co. No. 44 Vickers in the Inglewood field of Los Angeles Basin proved somewhat of a disappointment upon completion at 2,187 feet as it was good for only 51 bbls. of 18.6 gravity oil which showed a water cut of approximately 50 per cent. This was a reconditioning job and it is quite possible that some further work may be undertaken with a view of increasing the output and overcoming the water problem. In the Richfield district Union Oil Co. has completed No. 30 Chapman at 4,400 feet and put it on production pumping 208 bbls. of relatively clean 19.7 gravity oil.

Western Gulf Oil Co. made a formation test a few days ago in its No. 1 S. P. in the Cantua district of Fresno County but the test was not conclusive and an attempt will be made again in a few days. This wildcat is bottomed at 8,531 feet and has shown some promising indications. Mohawk Oil Co. stepped into this area a short time ago and is scheduled to spud in its wildcat in section 30-16-15 within another few days. This company acquired 300 acres northwest of the Western Gulf's test several months ago but retarded work until an additional 400 acres had been acquired. Up in the Avenal area Associated's wildcat got water in a formation test at 2,930 feet. If it is abandoned another test may be drilled some distance from the existing hole.

Central West Fields

(Continued from Page 85)

2,000 feet of gas, has been sold to a farmer.

In Stark County, section 8, Jackson Township, Ohio Fuel Gas Co. is drilling in on the Arthur Clay lease. In section 9, East Ohio Gas Co. is completing the John and L. Heppe No. 2, and are down 3,850 feet on the Frank Halasz farm in section 5. The same operators are spudding on the M. Carlson lease in section 2, same township. In section 15, Plain Township, Lyons & Co. No. 2 Hiram Shaub is down 740 feet. In the same section, East Ohio Gas Co. is drilling on the H. McDowell property, and completing No. 1 Kocher in section 26, Perry Township.

In Tuscarawas County, section 22, Clay Township, Ohio Fuel Gas Co. No. 1 Ben Carotheral is down 2,600 feet without any further show of oil or gas. The same operators are down 1,000 feet on the G. Barthlome lease, in section 4, Wayne Township.

KENTUCKY FIELD

Only three completions were reported in the Kentucky field this past week, but there has been no letdown in activity. In Ohio County, between Rough and Green Rivers, in the Livermore pool, Hupp & Jenkins No. 1 John Bell had a production of 10 bbls. the first 24 hours after a shot.

In McLean County, in the town of Livermore, A. Carpenter No. 1, on the Widow Folley lot, had an initial production of 45 bbls. after a shot. In the same district, on the Lula Cox town lot, Kentucky Natural Gas Co. No. 1 was a dry hole.

Rocky Mountain Runs

Estimated daily average production of the Rocky Mountain fields for the week ending October 3 was as follows:

WYOMING

	Bbls.
Salt Creek	16,260
Big Muddy	1,490
Badger Basin	40
Black Mountain	170
Byron	960
Dallas Derby	600
Dutton Creek	60
Elk Basin	470
Ferris	20
Frannie	580
Garland	500
Grass Creek	1,730
Hamilton dome	1,590
Hidden dome	130
Hudson	300
LaBarge	950
Lance Creek	6,130
Lost Soldier	1,010
Mule Creek	70
Midway	30
Oregon Basin	4,930
Osage	820
Pilot Butte	30
Quealy dome	70
Rock River	1,380
South Casper	520
Polson Spider	190
Simpson Ridge	20
Teapot	20
Total	41,070

MONTANA

Buckley Border	70
Cat Creek	750
Cut Bank	9,120
Dry Creek	300
Kevin-Sunburst	4,360
Lake Basin	40
Pondera	1,210
Total	15,850

COLORADO

Florence	130
Fort Collins and Wellington	310
Hes dome	3,690
Moffat	440
Orchard	70
Rangely	60
Tow Creek	200
Total	4,900

NEW MEXICO

Artesia	700
Cooper	7,250
Eunice	23,920
Hobbs	22,400
Jal	3,300
Lea	1,920
Maljamar	2,310
Monument	15,020
Rattlesnake	920
Table Mesa	90
Hogback	300
Total	77,430
Total Rocky Mountain region	139,250

Filling Station Chain Tax

INDIANAPOLIS, Ind., Oct. 5.—States are losing money instead of making money by applying provisions of chain store tax laws to gasoline filling stations, Frank E. Packard of Chicago, chairman of the central division of the American Petroleum Industries Committee told the twenty-ninth annual conference on taxation held under auspices of the National Tax Association.

With it economically impossible to operate filling stations under chain store tax laws, oil companies are retiring from retailing and leasing out stations, and as a result, he said, states are finding what was counted upon to be a source of heavy revenue is instead becoming progressively less productive.

"The volume of business transacted at the typical filling station," he said, "is so small as compared with that of the average chain store that a moderate tax on the chain store would constitute confiscation when applied to the filling station."

PERSONAL

R. B. McCOLL of New York was elected president of Alco Products, Inc., on October 1, succeeding JOSEPH DAVIS. Mr. McColl has been head of the diesel engine division of the American Locomotive Company, parent organization to Alco, which specializes in refinery equipment. The new president was born in Kilmarnock, Scotland, and attended Kilmarnock Academy and the Science and Art College. He moved to Canada in 1905 and became works manager for Montreal Locomotive Works, Ltd. Later he became general manager of the Armstrong Witworth Company's locomotive department, and then advancing to director of the works board of all the company's plants. In 1922 he crossed the Atlantic again and joined the American Locomotive Company in New York and later in Schenectady, N. Y., where he was manager of the plant.

M. F. BRIDGES, purchasing agent for Tide Water Oil Company, at Tulsa, took time out from his work last week to attend the Texas Centennial Exposition in Dallas, Tex., and the Frontier Celebration at Fort Worth, Tex.

W. J. BRUNDRED, president of the Brundred Oil Corporation, Oil City, Pa., is on a business trip in Kansas where he is engaged in directing the work preparatory to starting water-flooding operations on a property about 1 mile south of Garnett, Kans.

F. M. YOUNG of Racine, Wis., vice president of the Society of Automotive Engineers, will preside at the opening session of the society's regional meeting at Dallas, Tex., on Thursday, October 8. On October 9, he will present a paper on the "Care and Servicing of Engine Cooling Systems." Mr. Young is a pioneer manufacturer of engine cooling radiators and has spent many years in experimental research in the heat transfer field. His talk will be illustrated by many slides to show the transition of engine cooling.

A. J. BESSOLO, of the Gulf Oil Corporation, Pittsburgh, Pa., has been appointed member of the American Petroleum Institute's Committee on Railroad Transportation to succeed C. B. ELLIS. Mr. Bessolo also has been appointed a member of subcommittee on transportation regulations.

M. E. BROCK, of the Gulf Oil Corporation, Houston, Tex., has been appointed chairman of the nominating committee which will select 20 candidates for election as members of the general committee of the American Petroleum Institute's Division of Production for 1937. Members of the committee are: J. C. ASKAM, Ohio Oil Company, Findlay, Ohio; CHARLES FITZGERALD, Sinclair Refining Company, Fort Worth, Tex.; J. T. HAYWARD, Barnsdall Oil Company, Tulsa: B. E. HULL, Texas Pipe Line Company, Houston, Tex.: W. M. IRISH, III, Atlantic Oil Producing Co., Dallas, Tex.; D. R. KNOWLTON, Phillips Petroleum Company, Bartlesville, Okla.; T. W. PHILLIPS, Phillips Drilling Company, Butler, Pa.; A. C. RUBEL, Union Oil Company of California, Los Angeles, Calif.; M. R. SHAFFER, Empire Companies, Bartlesville; J. U. STAIR, Shell Oil Company, Los Angeles, Calif.; H. M. STALCUP, Skelly Oil Company, Tulsa; R. C. STONER, Standard Oil Company of California, San Francisco, Calif.; JOHN R. SUMAN, Humble Oil & Refining Company, Houston, and F. E. WOOD, Standard Oil Company (Indiana), Chicago.

J. W. STEELE, chairman of the Federal Tender Board No. 1, Kilgore, Tex., visited in Shreveport, La., during the week.

R. A. BROWN, SR., of Calgary, Alberta, recently spent a short holiday at Vancouver, British Columbia, and other Pacific Coast points.

DR. J. BRIAN EBY, vice president and general manager of the Diadem Oil Company, has returned to Houston, Tex., from a vacation in the East.

J. C. NOELL, who has been drilling on the Lisgar No. 1 well in Manitoba during the past summer, has returned to Calgary, Alberta.

N. C. McGOWEN, president of United Gas Public Service Company, Shreveport, La., and family, are completing a vacation trip to eastern points this week.

HARRY LEYENDECKER, chief scout for the Tide Water Oil Company at Houston, Tex., is spending his vacation in North Texas, visiting the Texas Centennial.

MRS. ROBERT L. TOPE, of Mount Pleasant, Mich., wife of an active Michigan operator, is recovering from a critical illness following the birth of a son, DONALD EUGENE, on September 22.

RUSSELL BROWN, general counsel, and C. E. BUCKNER, general secretary, of the Independent Petroleum Association of America, were in Shreveport, La., on business matters recently.

GEORGE C. CALVERT, independent operator of Fort Worth, Tex., has gone to his lodge in Minnesota to do some big-game hunting. During the past summer he spent considerable time there fishing.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Burdette Blue, city attorney of Bartlesville, Okla., and Miss Violet Katherine Kroehnert, of Arkansas City, Kans., will be married on October 12.

There are 12 wells drilling for gas in Alabama and 22 more wells are planned and locations have been made.

20 YEARS AGO

Experimenting with the Wells process the Constantin Refining Company of Tulsa, is recovering 35 to 37 per cent gasoline of 61 to 63 gravity from Cushing, Okla., crude.

Sinclair Refining Company will build a refinery at Kansas City, Mo., in addition to its Chicago and Fort Madison plants, plans for which have previously been announced.

A "mob of 2,000 citizens, chiefly oil men," stormed the jail in Augusta, a new and lively Kansas oil center, broke into the building and released a "prominent citizen" who had been arrested for violating a traffic law, and then forced the mayor to fire the chief of police.

10 YEARS AGO

It is estimated that the pipe lines of the United States contain about 15,000,000 barrels of oil moving to terminals at the rate of about 4 miles per hour.

Seminole production threatens to upset the good market producers have enjoyed this year. Some pessimists fear deep cuts in the price later in the fall. Oklahoma crude now brings $1.65 for oil of 28 gravity, with 8 cents added for each degree upward to 52 degrees and over at $3.57. Crude of 36 gravity brings $2.29 per barrel.

The Texas Panhandle is producing 140,500 barrels of oil per day, the greater part of it in Hutchinson County.

RALPH STEINMAN, of Tulsa, Okla., chief scout for Sinclair Prairie Oil Company, visited Shreveport, La., during the week.

P. N. WIGGINS, independent oil operator, Dallas, Tex., has been attending to business matters in Shreveport, La., during the week.

J. D. ROBERTS, of New Deal Specialty Company, Inc., of Okmulgee, Okla., is spending his vacation in Virginia and New York.

E. R. BROWN, retired oil man of Dallas, Tex., has donated $150,000 for the building of the Florence Nightingale Building, an addition to Baylor Hospital, in that city.

H. P. LEE TOMPKINS has returned to his former connection with J. PAUL GETTY as vice president of the latter's company and will be in charge of development operations east of California.

FRANK HENDERSON, president of Henderson Gasoline Company, New York City, and FRED HALL, of the same company at Amarillo, Tex., are in Shreveport, La., attending to business matters.

LIEUT.-COLONEL NELSON SPENCER, president of the Home Oil Co., Ltd. of Vancouver, British Columbia, with MRS. SPENCER, recently attended at Medicine Hat, Alberta, the reunion of the 175th overseas battalion, C.E.F., which he commanded in the World War.

MR. and MRS. WALTER L. McCLANAHAN, of Mount Pleasant, Mich., returned last week from an airplane trip to the Southwest where Mr. McClanahan is interested in a wildcat deep test with WALTER LEONARD, JR., another prominent Michigan operator.

PARAGRAPHS

JAY KORNFELD has resigned as district manager of the Taubman Supply Co. in Kansas to enter business for himself.

E. F. RANKIN, field engineer, recently joined the Tulsa staff of the National Tube Company, succeeding JOHN R. BOAX, who was transferred to Houston, Tex. Mr. Rankin came to Tulsa from Pittsburgh, Pa.

LEON H. A. WEAVER has accepted a position in the sales and advertising department of the Green Fuel Economizer Company, Inc., Beacon, N. Y. He was formerly publicity manager of the Superheater Company, New York.

O. V. DILL, district foreman for Ohio Oil Company at Cement, Okla., is recovering from serious illness following an appendectomy in a hospital at Chickasha, Okla. A. L. BURCH, of the Tulsa office, is substituting for Mr. Dill in the Cement area during the latter's illness.

L. G. RHEINBERGER, superintendent of gas measurement, Sinclair Prairie Oil Company, Tulsa, recently was elected president of the Technical Club of Oklahoma, succeeding T. R. GOEBEL, Skelly Oil Company. Other new officers of the club are W. D. MOORER, of the Moorlane Company, vice president; BAILEY VINSON, [illegible]uson Supply Company, secretary-treasurer.

VAN D. BENNETT, petroleum engineer, British American Oil Producing Company, has been in the Turner Valley field of Alberta, Canada, looking after oil interests of his company.

J. J. ZORICHAK, petroleum engineer with Stanolind Oil & Gas Company, was scheduled to speak on "Control of Water in Pumping Wells" at the meeting of the southwest division, petroleum section of the American Institute of Mining and Metallurgical Engineers in Fort Worth, Tex., this Thursday.

DR. R. E. SHERRILL, associate professor of geology, University of Pittsburgh, is the acting head of the Department of Oil and Gas Production during the absence of PROF. H. C. GEORGE, who is on a leave of absence due to illness. At the present time Doctor Sherrill is also a cooperating geologist for the Pennsylvania State Geological Survey. He is known in the West because of his position as a geologist for the Marland Oil Company, which he resigned 10 years ago to study for his Ph.D. degree at Cornell University

FIELD M. DAVIS, formerly representative for the Tret-O-Lite Company in South America, has resigned to accept the position of petroleum engineer representing the Association of Conroe Operators. Mr. Davis was graduated from the Colorado School of Mines in 1928 and was petroleum engineer in the West Texas district for Southern Crude Oil Purchasing Company, later holding the same position for Stanolind Oil & Gas Company in the East Texas field. From 1933 to 1935, before going to work for the Tret-O-Lite Company, he was a consulting engineer at Shreveport, La.

PAUL McGIVERN, district manager for Baker Oil Tools, Inc., has returned to his Tulsa headquarters after a vacation spent at the Texas Centennial Exposition in Dallas and at Galveston, Tex.

M. T. HARTWELL, geologist for the Texas Company, has been transferred from Wichita Falls to Fort Worth, Tex.

C. C. SPICER, president of Republic Petroleum Company, has returned to his offices in Los Angeles, Calif., after a two-week vacation spent touring Oregon.

R. T. WILSON, official of the Shamrock Oil & Gas Company, Pittsburgh, Pa., was a recent visitor in the Panhandle district where the company has large holdings.

FRANCIS (FRANK) REHM, of the Shell Oil Company with offices in Los Angeles, Calif., has been elected president of the Stanford University Alumni Association. Mr. Rehm's class was 1915.

C. E. DUFFIELD of Dallas, Tex.; O. M. BOREN and H. C. MILLER of Tyler, Tex., and H. K. OLIPHANT of New Orleans, La., oil men, have entries in the Centennial horse show in Fort Worth, Tex., which opened on October 2.

JOHN S. FULLER, engineer for the Oil Well Supply Company, with MRS. FULLER, and WALLACE R. GILCHRIST, of the Barnsdall Oil Company, and MRS. GILCHRIST have just returned to their homes in Tulsa from a motor trip during which the party visited in Mexico City, Mexico.

V. H. WILHELM, G. W. GOSLINE, J. B. MERRITT, LOT BOWEN, P. T. MARTIN and W. R. HARSHBARGER were elected district oil and gas commissioners in California for three-year terms, and ANGUS J. CRITES, W. L. BAGBY and RUDOLPH HARTMAN were elected district commissioners for one-year terms.

Scouted in Ranger Boom

Jess Scarborough, recently advanced to vice president of the Mid-Continent Petroleum Corporation, in charge of the land, geological and scouting departments, is intimately familiar with the duties of his post as a result of practical training. Incidentally, in the early days of his oil career he had the adventurous experience of scouting at Ranger in the boom period of that Texas field. Mr. Scarborough was born in 1889 on a ranch 20 miles north of Abilene, Tex. After attending the public schools of Abilene he entered Texas A. & M. College. Upon graduating from that institution he turned to the nearby oil fields, where he got a job as a roustabout. Soon he was dressing tools, and then drilling.

JESS SCARBOROUGH

After four years of this field work the young man left it to become an oil scout for Cosden & Company, which concern in 1925 became the Mid-Continent Petroleum Corporation. He served as scout not only in the Ranger area, but in other northern and central Texas fields. He was transferred to Tulsa in 1921 and assigned to the land department, where he handled the leasing business till he was appointed chief scout in 1923. The next year he was promoted to superintendent of the land department. Under his direction Mid-Continent has extended its leasing activities aggressively, participating in most of the important plays in Oklahoma, Texas, New Mexico and Kansas in recent years. With his family Mr. Scarborough resides in Tulsa.

J. D. BRANCE, president of the Brance-Krachy Company, Houston, Tex., left last week for a business trip to Denver, Colo.

HOWARD STUTCHBURY, of Edmonton, for 16 years trade commissioner for Alberta, has been appointed public relations counsel for Abasand Oils, Ltd.

F. E. RICE, vice president of the Phillips Petroleum Company, Bartlesville, Okla., spent a few days in the Amarillo, Tex., district during the past week.

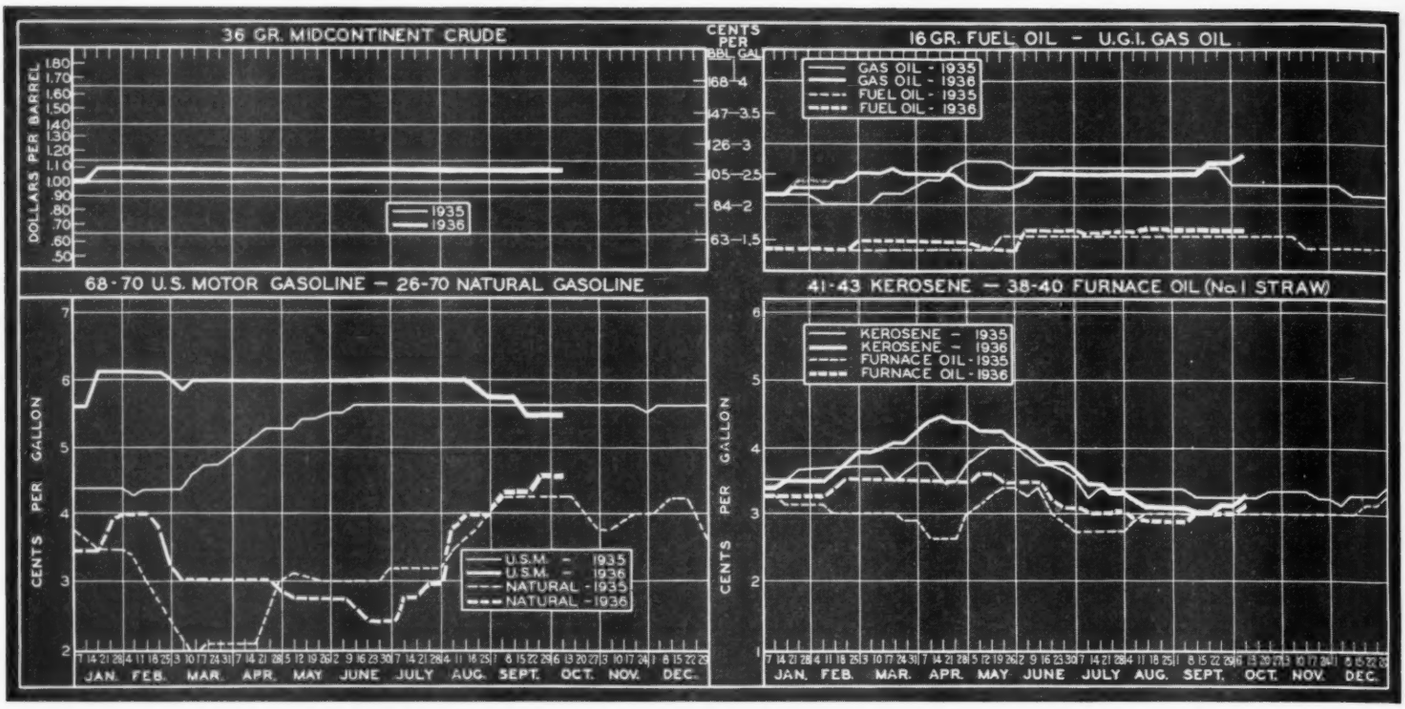
W. L. JAMES, purchasing agent, Stanolind Oil & Gas Company, has returned to Tulsa from a pipe line inspectoin trip which took him as far afield as Casper, Wyo.

VICTOR PECK, manager of the Pure Oil Company's offices in Mount Pleasant, Mich., is spending a few days in Texas, visiting the Fort Worth offices of the company.

PAYTON W. ANDERSON, consulting geologist, Wichita, Kans., was a business visitor in Tulsa the past week. He has interests in the new developments near Medicine Lodge, Kans.

JOHN ROWE and family of Houston, Tex., were visitors at the Frontier Centennial in Fort Worth during the past week. Mr. Rowe is director of purchases for the Humble Oil & Refining Company.

GEORGE E. BURTON, geologist, has been transferred to San Angelo, Tex., by the Sun Oil Company to be made district geologist. E. B. WILSON, formerly district geologist at San Angelo, has been transferred to the Tyler, Tex., office. W. M. CHADDICK, JR., is being moved to Odessa, Tex., by the company.


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
CENTS PER BBL. CAL
1935
1936
16 GR. FUEL OIL - U.G.I. GAS OIL
GAS OIL - 1935
GAS OIL - 1936
FUEL OIL - 1935
FUEL OIL - 1936
68-70 U.S. MOTOR GASOLINE — 26-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1935
U.S.M. - 1936
NATURAL - 1935
NATURAL - 1936
41-43 KEROSENE — 38-40 FURNACE OIL (No. 1 STRAW)
KEROSENE - 1935
KEROSENE - 1936
FURNACE OIL - 1935
FURNACE OIL - 1936
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Representative Mid-Continent Quotations on Crude Oil and Refined Products. Basis Oklahoma (Group 3)

Light Fuels Buoyant in Group 3 Area But Neutrals Take a Nose Dive

By T. F. SMILEY

Pronounced strengthening of the fuel oils and a precipitate drop in the neutrals were witnessed in the Group 3 market this week. Refinery gasoline, which had been reaching around for bottom, seemed to have found it. The naturals manifested the lusty vigor they have exhibited since the first week in July.

The whole range of light fuels was buoyant, with prices up. The improved position of prime-white distillate was attributed not so much to rise in demand as to a disposition among refiners to hold onto the material. Throughout the rest of the list, however, the growing tightness resulted from eagerness of buyers to place orders in a market where stocks were limited. Actual scarcity was reported in the Nos. 2 and 3 fuels. Brokers and jobbers were increasingly generous in their offers. In northern areas dealers, with supplies running low, were bidding up prices in their anxiety to avoid getting caught with empty tanks.

BRISKER MARKET SEASONAL

The brisker market for the furnace oils was characterized as seasonal. Although the larger jobbers laid in their stocks during the period of low prices last summer, a multitude of others, with scant storage capacity, must go to the open market for supplies as they are needed. Kerosene was in demand at higher prices.

The tightening market extended to the heavy fuels, although there was no reported mark-up of prices in this group. Refiners who have been selling low-viscosity, low cold-test material for delivery over three to six months were said to be restricting shipments now to 30 days.

Merciless slashing of neutral prices was said to have been a move on the part of Mid-Continent refiners to meet price-cutting. The blade went deep, from 1½ to 2¾ cents being lopped from former quotations. Bright stocks went under the knife too, but for less severe handling, a half-cent only being hacked off.

Gas oil, which has been hard to get for many weeks, was reported still scarcer, with prices stiffening.

Feeling was expressed generally in the trade that the downward trend of motor fuel had ended. Although nobody indicated higher prices were in immediate prospect, there was much more emphatic resistance to efforts on the part of buyers to beat down prices.

East Texas refiners who have been trying to establish a higher price level had no difficulty in moving their material until they began to quote an eighth above ruling prices in competitive districts. At that point buyers showed a disposition to forego the higher octane of the East Texas product in order to take advantage of the lower prices on lower-octane offerings from other areas. Whether the East Texas refiners would be able to command higher figures in the better market which now seems to be developing was a matter of speculation this week. Stocks in that area were reported to be well sold up.

NATURALS EXPECTED TO HOLD

The robust natural gasoline market is expected to continue well into November. Most of the movement is on contract. A better balance between supply and demand has been effected in the last week. Some big October buyers among Gulf Coast refiners are asking for shipments during the first half of the month, and this is adding to the active market right at this juncture.

The lively demand for natural throughout weeks when the refinery gasoline market was slipping has put 12-pound material in the position of costing the manufacturer more than most buyers will pay for it, since the price normally is based on 26-70. Sales of 12-pound at 5½ cents (the minimum quotation for the regular grade of refinery gasoline) were reported this week. It was explained that this price was given on relatively small quantities to customers of long standing. It did not represent the price at which general buyers could hope to get the material.

Refined Oil Market Barometer

Cooler weather is exerting a bracing influence on kerosene and light burning oils. Call for lighter winter lubricants is improving the market for neutrals except in the Mid-Continent region, where underselling has upset the price structure. Gasoline steadier except on the West Coast, with stocks apparently getting more nearly in balance with demand.

MID-CONTINENT. Gasoline firmer. Lubricants off. Fuels up. Naturals strong.

EAST COAST. Heating oil demand rising. Export gasoline brisk, domestic holding.

GULF COAST. Gasoline firm. Fuels and lubricants steady.

PENNSYLVANIA. Bright stocks off. Neutrals strong. Fuel oil up.

CALIFORNIA. Gasoline weaker. Fuel oil firm.

CHICAGO. Gasoline steadier, with tourist demand still good. Fuels firm.

Bunker Fuel Oil Advance Strengthens Burning Oil Market on East Coast

By H. STANLEY NORMAN

NEW YORK, Oct. 6.—The second advance of a nickel per barrel since June on grade C bunker fuel oil was launched October 1 along the entire eastern shipping board. The advance boosted prices to $1.15 per barrel at important northern ports, to $1.10 at intermediate stops along the Carolinas and to 95 cents per barrel at Gulf Coast terminals. Strength of the Bunker C fuel had been in evidence several weeks largely through diminishing stocks in the hands of all large marketers.

The advance was launched by the Standard Oil Co. of New Jersey and was followed by other large marketers all along the coast.

The actual advance in Bunker C fuel, relaying strength to other heavy fuels was coupled with increasing demand for kerosene and light burning oils and with a reversal of the export gasoline price trend at Gulf points to improve the general outlook.

Definite steps taken by some suppliers in the north Atlantic ports to meet competition in gasoline and kerosene was also showing results and the shifting into gradually lower brackets was reported halted at the end of last week.

New England and parts of the New York territory were forced into their first broad use of heating oils last week as temperatures dipped into the upper 40's. The need for heating oils was immediately reflected in spot orders for sizeable shipments and substantial distributors throughout the northeastern part of the country were ordering out material for stand-by requirements. Railroad sidings at centers of population were plentifully sprinkled with loaded tankcars for immediate movement into storage facilities of distributors and jobbers.

The heavier demand for kerosene developed during the past two weeks remained in evidence and the market was pointing upward although prices were unchanged awaiting the levelling-off process from previous advances. However, reaction of the market to the first pressure of demand indicated that it is in position to respond readily to the next call for supplies.

Elevation of Rumanian gasoline prices to approximately 5¾ cents per gallon for quality material, U. S. Gulf Coast basis, has imparted new strength to the domestic refiners open for export business. Since two cargoes of mixed gasoline, consisting of U. S. Motor grade and 64-66 375 endpoint, were sold to a French buyer two weeks ago at 4.9375 and 5.125 cents per gallon, respectively for the two grades, the Gulf Coast exporters have been bombarded with inquiries. Purchasers are said to have attempted in vain to duplicate the prices at which the two earlier cargoes were obtained. One partial cargo of about 35,000 bbls. was reported sold last week at 5.125 cents for U. S. Motor and 5.45 for 64-66 375 endpoint grades.

In view of the Rumanian position, however, it is doubtful that export gasoline can be obtained for less than 5½ cents per gallon.

Domestic inquiries for fuel oil with less attention on gasoline but still of some significance, indicated that considerable potential business is dangling before the refiners awaiting seasonal developments to goad purchasers into positive action.

Several inquiries are resting with Gulf Coast refiners for kerosene and one cargo of 75,000 bbls. of 41-43 water white material was ordered lifted in October at 3.75 cents per gallon. Buyers with inquiries in the market have indicated they will pay higher for November and December delivery.

Neutral oils from Pennsylvania district continued their lately developed popularity as jobbers prepare to meet demand for lighter winter lubricants. However, there was almost a corresponding slump in bright stock activity and shading of prices to do business when reported from representative sources. Probably a majority of bright stock suppliers, however, maintained their present prices rather well and a definite break in the market for this material was forstalled temporarily.

PRICE SHADING

Practice of some northern dealers offering gasoline in New York harbor and kerosene in Philadelphia waters at a quarter of a cent per gallon under the postings of larger dealers was met with competitive price shading last week. Inability of the market shaders to further weaken or reduce their margin was evidenced immediately and restoration of normal conditions was in process as the week closed. Continued loss of business to the barge lot suppliers of gasoline at prices a quarter of a cent per gallon below the recognized market finally prodded one or two of those sustaining the market to "meet fire with fire" and speedy return to normal was in prospect.

The retail gasoline situation in the northeastern part of the country is virtually unchanged. The range for house brand gasoline continues at 6 gallons for 98 cents to a flat 17 cents per gallon. Metropolitan New York stations are practically all selling 6 gallons for 98 cents and the same condition prevails at Newark and nearby points. However, outlying stations are now practically all quoting 17 cents per gallon, including 4 cents per gallon tax.

Evidence that refiners are still confident of higher prices in the wax market was given last week by the indifference displayed toward efforts of consumers to contract supplies ahead at prevailing figures. There is only normal trading in the wax market, but white scale at 2.4 to 2.5 cents and fully refined wax at prices ranging from 4.45 to 5.60 cents seem firmly established and not likely to move one way or the other for the present.

Despite cooler weather and the subsequent call for fuel oils which turned the entire list upward, gasoline consumption is more than meeting expectations and eastern marketers are anticipating continuation of the motor fuel demand for at least another month. The demand will not be in mid-summer proportions, but the outdoor attractions for autumn in the form of sporting events and scenery with reasonably comfortable temperatures will sustain the consumption at satisfactory levels, marketers believe.

There is still much uncertainty as to volume of domestic burning oil requirements in the East this winter, but the speculation is based almost entirely on temperatures. The general belief continues among the well-informed observers, however, that consumption probably will surprise even the more liberal estimators. The views, sustained only by burner sales, installations and over-the-season contracts, seem reflected to no slight degree in the trends developing even this early in the fall.

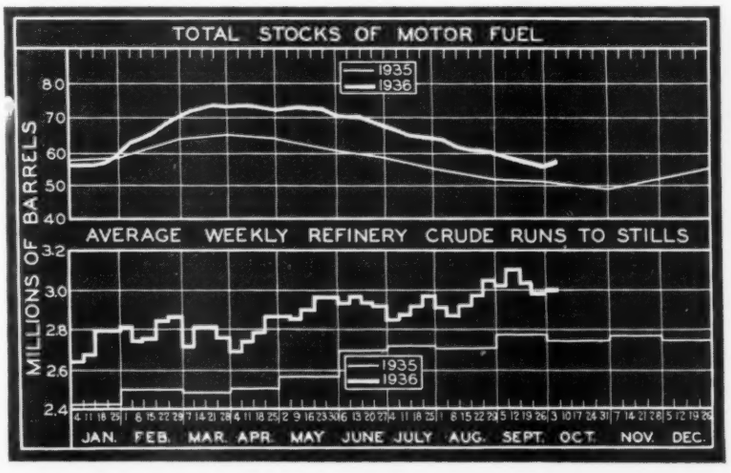
The No. 4 light fuel appeared especially popular last week and some jobbers were asking a quarter of a cent per gallon over previous quotations. There were also scattered reports of stronger asking prices for No. 1 and No. 3 fuel oil.

A. P. I. Weekly Refinery Statistics

Week Ending October 3, 1936

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	513,000	16,130,000	12,463,000
Applachian	94.8	103,000	2,041,000	627,000
Indiana, Illinois, Kentucky	96.1	434,000	8,184,000	6,445,000
Oklahoma, Kansas, Missouri	84.8	278,000	5,542,000	3,541,000
Inland Texas	48.5	117,000	1,384,000	1,718,000
Texas Gulf	97.0	622,000	6,924,000	8,646,000
Louisiana Gulf	96.4	115,000	1,555,000	2,369,000
North Louisiana and Arkansas	90 0	43,000	277,000	359,000
Rocky Mountains	61.9	45,000	759,000	772,000
California	92.6	515,000	11,736,000	73,462,000
Total reported	89.8	2,785,000	54,532,000	110,402,000
Estimated unreported	.....	215,000	3,078,000	2,310,000
*Estimated total	.....	3,000,000	57,610,000	112,712,000
*Estimated total previous week	.....	2,990,000	56,472,000	112,504,000
†October 31, 1935	.....	2,746,000	49,798,000	109,952,000

*Bureau of Mines basis, currently estimated. †Monthly report, U. S. Bureau of Mines.



Glen Horton, assistant purchasing agent, Indian Territory Illuminating Oil Co., Bartlesville, Okla., visited his parents at Ottawa, Kans., while on vacation recently; then visited relatived in Eldorado, Kans., and ended the jaunt with a visit to the Texas Centennial at Dallas, Tex.

RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of October 6, 1936

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank-wagon or 3 cents a gallon off retail prices is permitted for purchases between 4,000 and 10,000 gallons per month or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Standard Oil Co. (Indiana)

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank-wag.
Chicago	15.4	17.4	4.0	9.2
Decatur, Ill.	15.4	....	4.0	9.2
E. St. Louis	15.1	....	4.0	8.9
Joliet	14.5	17.4	4.0	9.2
Peoria	15.4	17.4	4.0	9.2
Quincy	15.2	17.2	4.0	9.0
Davenport, Ia.	15.4	(†)	4.0	9.2
Des Moines	15.2	(†)	4.0	9.0
Mason City	15.6	(†)	4.0	9.4
Sioux City	15.4	(†)	4.0	9.2
Duluth, Minn.	16.2	(†)	4.0	10.0
Mankato	15.8	(†)	4.0	9.6
Minneapolis	15.8	(†)	4.0	9.6
La Crosse, Wis.	16.8	(†)	5.0	9.6
Green Bay	17.1	(†)	5.0	9.9
Milwaukee	16.7	(†)	5.0	9.5
Madison	16.8	(†)	5.0	9.6
Detroit, Mich.	15.0	(†)	4.0	8.8
Grand Rapids	15.4	(†)	4.0	9.3
Saginaw	15.6	(†)	4.0	10.1
Evansville, Ind.	17.1	(†)	5.0	9.7
Indianapolis	17.3	(†)	5.0	9.0
South Bend	17.5	(†)	5.0	9.0
Fargo, N. Dak.	16.8	18.8	4.0	10.6
Huron, S. Dak.	17.3	(†)	5.0	10.1
Sioux Falls	16.8	(†)	5.0	9.6
Kans. City, Mo.*	14.8	17.1	4.0	8.0
Springfield	14.5	(†)	4.0	8.3
St. Louis	15.1	(†)	4.0	8.9
St. Joseph*	14.8	(†)	4.0	8.6
Wichita, Kans.	14.3	(†)	4.0	8.0
Bartlesville, Ok.	15.0	12.0	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

†Standard Oil Co. (Indiana) has leased all service stations in these cities.

Discounts to dealers except in Iowa 3¼ cents on premium and regular and 2½ cents on third grade off service station prices; discounts to dealers in metropolitan Chicago one-half cent larger than rest of Standard of Indiana territory, namely 4 cents and 3 cents on respective grades. Dealers in Iowa sold at posted "Dealer Prices."

Stanolex Fuel Oil in Chicago

Effective October 5, 1936, f.o.b. Chicago tank-wagon prices: Range oil, 1-99 gallons, 8.75 cents; 100-119 gallons, 7.75 cents; 150 gallons and over, 7.25 cents. Stanolex No. 1, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.75 cents; 150 gallons and over, 6.75 cents. Stanolex furnace oil, 1-149 gallons, 7.75 cents; 150 gallons and over, 6.75 cents. Stanolex A, 1-399 gallons, 6 cents; 400 gallons and over, 5 cents. Stanolex B, 1-799 gallons, 5.5 cents; 800 gallons and over, 4.5 cents.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank-wag.
Atlanta, Ga.	20.5	22.5	7.0	*13.0
Augusta	18.75	19.5	7.0	*13.5
Macon	20.0	22.0	7.0	*14.0
Savannah	18.5	20.5	7.0	*12.5
Birm'ham, Ala.	21.0	23.0	8.0	12.0
Mobile	20.0	21.0	9.0	11.0
Montgomery	21.0	22.0	9.0	14.0
Jackson, Miss.	20.0	22.0	7.0	*12.5
Vicksburg	19.5	....	7.0	12.5
Jacksonville, Fla.	18.0	20.0	8.0	11.5
Miami	19.5	21.5	8.0	12.5
Pensacola	21.5	23.5	9.0	12.0
Tampa	18.0	20.0	8.0	11.5
Lexington, Ky.	19.0	21.0	6.0	11.0
Covington	18.5	20.5	6.0	10.5
Louisville	19.0	21.0	6.0	10.0
Paducah	18.0	19.0	6.0	8.5

*Includes 1 cent state tax. Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon. Pensacola, Fla., has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank-wag.
Denver, Colo.	19.0	21.0	5.0	11.0
Grand Junction	21.5	23.5	5.0	15.0
Pueblo	19.0	21.0	5.0	10.0
Casper, Wyo.	19.5	21.5	5.0	11.5
Cheyenne	19.5	21.5	5.0	13.0
Butte, Mont.	21.0	23.0	6.0	14.5
Billings	22.5	24.5	6.0	14.5
Helena	22.5	24.5	6.0	14.5
Great Falls	22.5	24.5	6.0	14.5
Salt Lake, Utah	21.0	23.0	5.0	16.0
Twin Falls, Ida.	23.0	25.0	6.0	18.0
Boise	22.5	24.5	6.0	18.0
Albu'que, N. M.	19.0	21.0	*6.5	13.0

*Includes one-half cent city tax.

Discount to dealers with or without contract in Continental territory: Undivided dealer discount off service station price 4 cents except in Montana where a discount of 2 cents off tank-wagon price only is allowed; divided dealer accounts, 3½ cents.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank-wag.
San Francisco	17.0	18.0	4.0	11.5
Los Angeles	16.5	17.5	4.0	9.0
Fresno, Calif.	17.5	18.5	4.0	11.0
Phoenix, Ariz.	21.0	22.0	6.0	‡16.0
Reno, Nev.	19.5	20.5	5.0	13.0
Portland, Ore.	19.5	20.5	6.0	13.5
Seattle, Wash.	19.5	20.5	6.0	13.5
Tacoma	19.5	20.5	6.0	13.5
Spokane	22.5	23.5	6.0	16.5

Discounts to dealers: on gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial dealers: on tank-wagon price: on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank-wag.
Atl'tic City, N.J.	13.0	....	4.0	9.0
Newark	13.0	....	4.0	7.5
Annapolis, Md.	15.1	....	5.0	10.0
Baltimore	14.0	....	5.0	8.0
Cumberland	16.6	....	5.0	10.0
Wash'g'n, D.C.	12.0	15.5	3.0	9.0
Danville, Va.	17.2	20.7	6.0	12.9
Norfolk	16.0	19.5	6.0	11.3
Petersburg	16.3	19.8	6.0	11.7
Richmond	16.3	19.8	6.0	11.7
Roanoke	17.5	21.0	6.0	12.9
Charles'n, W. Va.	15.8	....	5.0	12.6
Parkersburg	15.1	....	5.0	11.2
Wheeling	15.0	....	5.0	12.2
Charlotte, N. C.	18.4	....	7.0	12.6
Hickory	18.9	22.4	7.0	13.0
Mt. Airy	18.7	....	7.0	12.8
Raleigh	18.0	....	7.0	12.1
Salisbury	18.5	....	7.0	12.7
Charleston, S. C.	17.0	20.5	7.0	11.1
Columbia	*18.0	21.5	7.0	12.1
Spartanburg	18.7	22.2	7.0	12.9

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount (if necessary) is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank-wag.
Omaha	17.8	19.8	6.0	9.5
McCook	18.5	20.5	6.0	10.2
Norfolk	18.2	20.2	6.0	9.9
North Platte	18.6	20.9	6.0	10.3
Scotts Bluff	19.3	21.3	6.0	11.0

Note—Discounts to dealers: where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents.

Where service station gasoline prices are below normal resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank-wagon deliveries covered only by standard commercial consumers contract effective January 1, 1935.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank-wag.
Philadelphia, Pa.	16.5	17.5	5.0	9.5
Pittsburgh	17.5	19.5	5.0	9.0
Allentown	16.75	....	5.0	9.5
Erie	17.5	18.5	5.0	8.0
Scranton	16.75	....	5.0	10.0
Altoona	17.5	19.5	5.0	9.5
Dover, Del.	17.0	....	5.0	10.0
Wilmington	17.0	....	5.0	9.0
Springf'ld, Mass.	13.0	16.5	4.0	7.5
Worcester	14.0	17.5	4.0	7.75
Hartford, Conn.	13.0	16.5	4.0	7.0
New Haven	13.0	16.5	4.0	7.5
Providence, R. I.	12.0	15.5	3.0	7.0

Note—Tank-wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank-wag.
N. Orleans, La.	19.5	23.0	*10.0	†13.0
Baton Rouge	17.5	21.0	8.0	11.5
Alexandria	18.0	....	8.0	11.0
Lafayette	18.5	....	8.0	12.5
Lake Charles	18.5	....	8.0	11.0
Shreveport	17.0	20.5	8.0	10.0
Knoxville, Tenn.	20.5	24.0	8.0	14.0
Memphis	18.5	22.0	8.0	9.5
Chattanooga	20.0	....	8.0	11.5
Nashville	19.5	23.0	8.0	10.0
Bristol	19.25	....	8.0	14.5

*Includes 2-cent parish tax. †Includes 1 cent parish tax and 1 cent state tax.

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline: Post. deal.	Gasoline: Serv. sta.	Gasoline: Inc tax	Kero. tank-wag.
Albany, N. Y.	13.0	....	4.0	7.75
*Met. N. Y.:				
Manhtn., Bronx	12.7	....	4.0	7.25
Staten Island	13.0	....	4.0	7.25
Qu'ns & Br'klyn	12.7	....	4.0	7.25
Buffalo	13.5	....	4.0	8.25
Rochester	13.5	....	4.0	8.25
Syracuse	13.5	....	4.0	8.75
Boston, Mass.	13.0	....	4.0	7.50
Portland, Me.	15.0	....	5.0	7.75
Manch'ter, N. H.	15.5	....	5.0	8.00
Burlington, Vt.	16.5	....	5.0	8.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Southwestern District

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank-wag.
Dallas, Tex.	15.0	17.0	5.0	7.5
Fort Worth	15.0	17.0	5.0	8.5
Houston	16.0	18.0	5.0	8.5
San Antonio	16.0	18.0	5.0	7.5
El Paso	17.0	19.0	5.0	8.0
Muskogee, Ok.	17.0	19.0	5.0	8.0
Okla. City	17.0	19.0	5.0	8.0
Tulsa	17.0	19.0	5.0	8.0
Ft. Smith, Ark.	17.0	19.0	5.0	8.0
Little Rock	19.5	21.5	7.5	9.5
Texarkana	16.5	18.5	5.0	8.5

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 100 gallon lots if covered by contract.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank-wag.
Ohio points	17.5	19.5	5.0	*13.5

*Includes state tax of 1 cent.

Canada*

3-Star Imperial Gasoline

IMPERIAL OIL, LTD.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank-wag.
Hamilton, Ont.	21.0	23.5	6.0	17.0
Toronto, Ont.	21.0	23.5	6.0	17.0
Brandon, Man.	29.8	32.8	7.0	22.3
Winnipeg, Man.	28.2	31.2	7.0	20.7
Regina, Sask.	29.5	32.5	7.0	22.0
Saskatoon, Sask.	32.3	35.3	7.0	24.8
Edmonton, Alta.	30.5	33.5	7.0	24.2
Calgary, Alta	28.0	31.0	7.0	21.5
Vancouver, B. C.	22.0	26.0	7.0	23.0
Montreal, Que.	18.5	....	6.0	17.5
St. John, N. B.	24.0	28.0	8.0	18.5
Halifax, N. S.	24.0	28.0	8.0	18.5

*Imperial gallon used in Canada.

Discount to dealers: Divided dealers pay 3 cents per gallon below station price; undivided dealers pay 4 cents per gallon below station price except in cities of Hamilton, Toronto and Montreal where discounts below station price are one-half cent per gallon less and in Vancouver where discounts are 1 cent per gallon more.

Retail Price Changes

Standard Oil Co. of New Jersey September 19 reduced station gasoline .5 cent in Washington.

Standard Oil Co. of Louisiana September 16 reduced tank-wagon kerosene 1.5 cents in Memphis.

Imperial Oil, Ltd., September 25 reduced tank-wagon gasoline 1 cent in Montreal; October 1 reduced tank-wagon and station gasoline 1 cent in Halifax and St. John; September 17 reduced tank-wagon gasoline 3 cents and station gasoline 2 cents in Vancouver.

Road Oil and Asphalt Congress

The program for the fifth National Road Oil and Asphalt Congress to be held in Tulsa, October 8 and 9 is announced by Emby Kaye, general chairman. The congress is sponsored through the Western Petroleum Refiners Association, with the cooperation of highway departments, universities, contractors associations and civic organizations. The program follows:

October 8: "Asphalt in the Paving Industry," by L. M. Law, Shell Petroleum Corp.; "Bituminous Mat Construction in Arkansas," by Fred Allison, chief chemist, Arkansas Highway Department; "Developments of Bituminous Surfaces in Kansas," by L. L. Marsh, assistant maintenance engineer, Kansas Highway Department; "The Necessity for Asphalt Research," by Dr. Sidney Born, Tulsa University.

October 9: "Calcium Chloride for Base Stabilization Before Bituminous Surfacing," by Brant Holme, highway engineer, Morton Salt Co.; "Soil Stabilization by Sub-surface Oiling," by L. T. Schappler, Missouri Highway Department; "Federal Financing of Highways," by Wilburn F. Cartwright, Oklahoma Representative in Congress; "Some Problems of Bituminous Construction," by C. M. Gillette, materials engineer, U. S. Bureau of Public Roads, Fort Worth; "Bituminous Practice in Montana and Report on Second Montana Bituminous Conference," by E. B. Donohue, assistant state engineer, Montana Highway Department.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of October 6, 1936

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:

62 octane and below (3d gr.)	.04½	.04¾
63-67 octane	.04¾	.05¼
68-70 octane (regular)	.05½	.05¾
60-62 400 grades:		
62 octane and below (3d gr.)	.04½	.04¾
63-67 octane	.04¾	.05¼
68-70 octane (regular)	.05½	.05¾
64-66 375	.04¾	.05
68-70 360	.05	.05⅛

NORTH TEXAS—

U. S. Motor grades:

62 octane and below	.04⅝	.04¾
63-67 octane	.05	.05¼
68-70 octane (regular)	.05⅝	.05¾
60-62 400	.04⅝	.04⅞
64-66 375	.04⅞	.05

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:

62 octane and below	.05½	.05⅝
63-67 octane	.06¼	.06½
68-70 octane (regular)	.06½	.06¾

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:

62 octane and below	.05½	.05⅝
63-67 octane	.06¼	.06½
68-70 octane (regular)	.06½	.06¾

CHICAGO (Based on Group 3)—

U. S. Motor grades:

62 octane and below	.04½	.04¾
63-67 octane	.05	.05¼
68-70 octane (regular)	.05½	.05¾
60-62 400 grades:		
62 octane and below	.04½	.04¾
63-67 octane	.05	.05¼
68-70 octane (regular)	.05½	.05¾
64-66 375	.04¾	.05
68-70 360	.05	.05⅛

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane		.05⅝
60-64.9 octane		.07
65-70 octane		.07¼
64-66 375		.06⅛
68-70 350		.06⅜

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07	.08
58-60 400	.07¾	.08½

EAST COAST (domestic)—

U. S. Motor below 60 octane:		
*New York (Bayonne)		.06¼
Baltimore		.06¼
U. S. Motor, 60-64.9 octane:		
*New York (Bayonne)		.06½
Philadelphia	.06½	.06⅝
Boston		.06⅝
Baltimore	.06½	.06⅝
Charleston, S. C.		.06⅝
U. S. Motor, 65 and above:		
*New York (Bayonne)		.06⅝
Philadelphia	.06⅝	.07
Boston		.07
Baltimore	.06⅝	.07
Charleston, S. C.		.07

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05½	.05⅝
60-64.9 octane	.05⅞	.06
65 octane and higher	.06	.06¼

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)		.05½
52-54 450 (blending)		.05⅝
54-56 450 (blending)		.05⅝

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.04½
Grade 18-55	.05¼	.05½
Low vapor pressure grade:		
*14-pound v.p. (max.)	.05⅞	.06
*12-pound v.p. (max.)	.06¼	.06½

*Nominal.

NORTH TEXAS—

Grade 26-70		.04¾
Grade 18-55	.05	.05⅛

CALIFORNIA—

75-85 375-390	.07	.07⅜

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.04⅝	.04¾

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 l.b.p., 110 flash, 540-550 e.p.	.03½
41-43 gr., 300-350 l.b.p., 110-125 flash, 500-520 e.p.	.03¾
46-48 gr., 210-230 l.b.p., 480 max. e.p.	.04½

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03¼	.03⅜
42-44	.03⅜	.03½

NORTH TEXAS—

41-43	.03¼	.03⅜

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.03⅜	.03⅞

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.04	.04¼

PENNSYLVANIA (inland refineries)—

45	.04¾	.04⅞
46	.04⅞	.05
47	.05	.05⅛

CHICAGO (Based on Group 3)—

41-43	.03	.03¼
42-44	.03¼	.03½

CALIFORNIA (Pac. Coast market)—

38-40 high burning test	.03½	.05

NEW YORK (Bayonne, N. J.)—

41-43		.04⅝

GULF COAST (domestic)—

41-43		.03⅞

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03¼	.03½
No. 1 straw, 38-40	.03⅛	.03¼
No. 2 straw, 32-36	.03	.03⅛
No. 2 dark, 32-36	.02⅞	.03⅛
No. 3, 28-32	.02⅞	.03
No. 3, 15 and above, 28-32	.02⅜	.02⅞

NORTH TEXAS—

No. 1 prime white, 38-42	.03⅛	.03¼
No. 1 straw, 38-40	.03	.03⅛

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03	.03⅛

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36		.03¼
No. 3, 28-32		.03

CHICAGO (Based on Group 3)—

No. 1 prime white, 38-40	.03	.03¼
No. 1 straw, 38-40	.02⅞	.03⅛
No. 2 straw, 32-36	.02⅞	.03
No. 2 dark, 32-36	.02⅞	.03
No. 3 zero to 15, 28-32	.02¾	.03
No. 3, 15 and above, 28-32	.02½	.02¾

NEW YORK (Bayonne, N. J.)—

*No. 1	.04½	.04¾
*No. 2	.04	.04¼
*No. 4		.01

*Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02¾	.02⅞
No. 4, low cold test, 24-28	.95	1.05
No. 4, 15 and above, 24-28	.80	.85
No. 5, low cold test, 18-22	.72½	.80
Below 18 fuel oil, industrial	.70	.75

NORTH TEXAS—

U.G.I. gas oil	.02½	.02⅝
No. 4, low cold test, 24-28	.95	1.00
No. 5, low cold test	.77½	.80
Below 18 fuel oil, industrial	.65	.75

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U.G.I. gas oil	.02⅝	.02¾
10-14 fuel oil, industrial	.70	.75

ARKANSAS (Ark., N. La., Miss. del.)—

10-14 fuel oil, industrial	.60	.65

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02½	.02⅝
No. 4, low cold test, 24-28	.95	1.00
No. 4, 15 and above, 24-28	.80	.82½
No. 5, low cold test, 18-22	.72½	.75
No. 6, low cold test, 10-16	.62½	.67½

PENNSYLVANIA (inland refineries)—

36-40	.04¼	.04¾

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	.95	1.15
24 plus diesel	1.00	1.25
24 plus diesel (bunkers)	1.05	1.30
12-16 (bunkers at tidewater)	.85	.95
10-16 (cargo lots)	.75	.95
12-17 (tankcars)	.70	.95
San Joaquin Valley:		
10-18 (tankcars)	.70	.75
San Francisco:		
27 plus diesel		1.35
24 plus diesel (bunkers)		1.35
10-16 (bunkers)		1.00

GULF COAST—

28-30 gas oil	.03¼	.03⅜
28-30 diesel (bunkers)		1.50
Bunkers (bulk cargoes)		.87
Bunker C (bunkers)		.95

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04¼
28-30 diesel (lighterage 6¼ per bbl.)		1.65
28-30 diesel (tankcars)	.04¼	.04½
*Bunker C (to ocean-going ships in N. Y. harbor)		1.15
Industrial fuel (tankcars)		.03¾

*Lighterage charge 5c bbl. additional.

Bright and Steam-Refined

OKLAHOMA (Group 3)—

Bright Stocks:		
190-200 D, 15-25		.21
150-160 D, 0-10		.18
150-160 D, 15-25		.17½
150-160 E, 15-25		.17
100-110 D, 0-10		.16½
Steam refined:		
631 green (treated)		.13½
600 dark green (untreated)		.05½

PENNSYLVANIA—

Bright Stocks (Pennsylvania grade No. 8 color, 145-50 at 510; 540-550 flash):		
10 pour test	.24	.24½
15 pour test	.23	.23½
20 pour test	.22	.22½
25 pour test	.21	.21½
Steam refined:		
600	.13	.13½
650	.14½	.15
600 Pennsylvania flash	.15½	.16
630 flash	.17½	.18
600 Warren E filtered	.15½	.16

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:		
150-3		.08½
180-3		.09½
180-4		.09
200-3		.10
200-4		.09½
250-3		.11
250-4		.10½
280-3		.12
280-4		.11½
300-3½		.12½
400-3½		.13½
100-2½ paraffin oil		.05¾
15-20 Cold Test:		
200-3		.09½
200-4		.09
250-3		.10½
250-4		.10
280-3		.11½
280-4		.11

GULF COAST—

Pale Oils:		
200-3	.06½	.07
300-3	.07	.07½
500-3½	.08	.08½
750-3½	.08½	.09
1,200-3½	.09	.09¼
2,000-4	.09¼	.09½
Red Oils:		
200-5-6	.06½	.06¾
300-5-6	.06¾	.07
500-5-6	.07½	.08
750	.08	.08½
1,200-5-6	.08½	.09

CALIFORNIA (moving to dom. market)

Pale Oils:		
100-2½-3		.06
200-2½-3		.06¼
300-3-3½		.06½
400-3-4	.08½	.09¼
450-3-4	.09¾	.10
550-3-4	.10	.10¼
600-3-4	.10¼	.10½
Red Oils:		
200-4-5		.06
300-5-6		.06¼
350-5-6	.07	.08
400-5-6	.08	.08¼
450-5-6	.08¼	.08½
500-5-6	.08½	.09
600-5-6½	.09	.09½
700-6½ plus	.09¾	.10
750-6½ plus	.10	.10¼
900-6½ plus	.10¼	.10½

PENNSYLVANIA—

150 vis. at 750° F. color, 400-405 flash:		
Zero pour test	.20½	.21
10 pour test	.19½	.20
15 pour test	.19	.19½
25 pour test	.18	.18½
180 vis. at 70° F., 3 color:		
25 pour test	.20½	.21
200 vis. at 70° F., 3 color:		
Zero pour test	.24	.24½
10 pour test	.23	.23½
15 pour test	.22½	.23
25 pour test	.21½	.22

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02½	.02⅝

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0245	.0250
124-126 (a.m.p.) w.c. scale	.0250	.0265

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0240	.0250
124-126 (a.m.p.) y.s.	.0240	.0245
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06¾
Snow white	.07¾	.07⅞
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.06¼
60-62 400		.06⅝
61-63 390	.05¾	.06½
61-66 375		.05½

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04¾
55-65 octane	.04¾	.05
65-67 octane		.05
67-69 octane		.05¼
Above 69 octane		.05½
65 and above 400 e.p.	.05½	.06

KEROSENE

GULF COAST—

41-43 prime white		.03⅝
41-43 water white		.03¾
44 water white		.04½

LOS ANGELES—

41-43 water white	.04½	.05

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder Stocks:		
600 Warren E.	.22½	.23
600 S.R. unfiltered	.20	.20½
650 S.R. unfiltered		.21½
600 flash S.R.		.22½
630 flash S.R.	.24	.24½
Bright Stocks:		
8 color		.28
6½ plus color in dilution		.27

NEUTRAL OIL

260-3 color		.27
150-3 color		.23½

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0260	.0270
124-126 y.s.	.0245	.0250

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 9, 1936)

East Texas*	$1.15
Van, Tex.†	1.02
Altus and Tipton, Okla.‡	1.08
Other fields (see gravity table).	

*All companies. †Pure Oil Co. ‡Gulf Oil Corp.

West Texas

Crane, Upton, Howard, Glasscock and Mitchell Counties	$ .80
Winkler County	.85
Lea County, N. Mex.	.85
Pecos County*	.85
Pecos shallow†	.75

*Shell Petroleum Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Petroleum Corp.

Note—For Humble, Magnolia and Texas Co.'s West Texas and Lea County prices see gravity table. Above prices are those of other buyers.

Rocky Mountain States

(Effective January 9, 1936)

Iles, Colo., light*	$1.06
Iles, Colo., heavy*	1.00
Greybull, Wyo.*	1.28
Torchlight, Wyo.*	1.28
Grass Creek, Wyo., light*†	1.18
Grass Creek, Wyo., heavy*†	.72
Hamilton Dome, Wyo.*	.67
Elk Basin, Wyo., light*†	1.18
Frannie, Wyo., heavy*	.72
Frannie, Wyo., light (Feb. 24, 1936)*	.78
Hogback, N. Mex.*	1.21
Pondera, Mont., (Jan. 29, 1936)*	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.11
Rock Creek, Wyo.†	1.12
Artesia, N. Mex. (Jan. 9, 1936)‡	.80
Maljamar, N. Mex. (Jan. 9, 1936)‡	.80
Fort Collins and Wellington, Colo. (Jan. 9, 1936)‡	See Note
Florence, Colo.	.98
Lance Creek, Wyo.	.85
Lost Soldier, Wyo. (Sept. 30, 1933)	.88
Hudson, Wyo. (June 2, 1931)	.65
Sunburst, Mont. (June 5, 1936)	1.15
Cat Creek, Mont.	1.28
Cut Bank, Mont.	1.35

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Note—Fort Collins and Wellington are not posted, price 5 cents under quotation of Salt Creek crude of like gravity (Fort Collins 36°; Wellington 33°). *Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Southwest Texas

(January 9, 1936)

Saxet	$ .90
Mirando	.85
Pettus	1.25
Salt Flat*	.97
Salt Flat‡	.97
Darst Creek*	.97
Darst Creek†	.97
Luling	.90
Lytton Springs	1.00
Duval County	.85

*Humble Oil & Refining Co. †Magnolia Petroleum Co., Gulf Pipe Line Co. and Texas Co. ‡Shell Petroleum Corp. Saxet posted by Humble and Texas; Mirando by Humble and Magnolia; Pettus by Humble; Salt Flat by Humble; Luling and Lytton Springs by Magnolia; Duval by Texas Co.

Gulf Coast

(January 9, 1936)

Cleveland, Tex.	$1.10
Hardin, Tex.	1.03
Greta, Tex.	.90
Refugio, Tex., heavy	.90
Tomball, Tex.	1.30
LaFitte, La.	1.12
Livingston, Tex.	1.15
Bosco, La., (Jan. 16, 1936)	1.05
Evangeline, La.	1.07
Welsh, La.	.96

Cleveland and Hardin by Magnolia; Greta by Texas Co.; Refugio by Humble; Tomball by Humble and Magnolia; LaFitte by Texas Co.; Bosco by Pure; Evangeline and Welsh by Stanolind Oil & Gas Co.; Livingston by Shell Petroleum Corp.

Middle Western States

OHIO OIL CO.

Lima (Sept. 22, 1936)	$1.15
Illinois (Jan. 9, 1936)	1.23
Princeton, Ind. (Jan. 9, 1936)*	1.23
Midland, Mich. (Sept. 16, 1936)*	1.32
West Branch, Mich. (Sept. 16, 1936)	1.16
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River (Jan. 9, 1936)	1.30
Kentucky River (Jan. 9, 1936)	1.38
Western Kentucky (Jan. 9, 1936)	1.23

*Posted by Simrall Corp. and Pure Oil Co. and includes Greendale, Porter, Beaverton and Crystal crudes. West Branch, Mich., by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

North Louisiana and Arkansas

Smackover, all grades (Jan. 10, 1936)*	$ .75
Smackover, all grades (Jan. 9, 1936)†	.80
Tullos and Urania (Jan. 10, 1936)	.97
Nevada, Ark. (Jan. 10, 1936)	.65
El Dorado East field (Jan. 16, 1936)	.75
Converse, Holly, Pleasant Hill and Zwolle (Jan. 10, 1936)*	1.10
Lisbon, Ark. (Jan. 10, 1936)*	1.10
Elm Grove, La. (Jan. 10, 1936)	.80

*Stanard Oil Co. of Louisiana, Gulf Refining Co., Louisiana Oil Refining Co., Texas Co. (effective January 14) and Magnolia Petroleum Co. (effective January 16). Urania by H. L. Hunt Co. and Louisiana Oil Refining Co. Nevada by Standard of Louisiana, El Dorado East field by Magnolia Petroleum Co. Phillips Petroleum Co. (effective January 17), posts 75 cents for all grades in Union and Ouachita Counties, Arkansas.

Eastern States

TIDE WATER PIPE LINE CO.

(Effective Jan. 13, 1936)

Bradford, Pa.	$2.45
Allegany, N. Y.	2.45

SOUTH PENN OIL CO.

(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.45
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.17
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.12
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.97
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Sept. 18, 1936)	1.32

PENNZOIL CO.

(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines:	
Group A — Includes Cochran, Franklin, Hamilton and Doolittle districts.	2.42
Group B — Includes Titusville district.	2.41
Group C — Includes Turkey and Tidioute districts.	2.40
Group D — Includes Bear Creek and Porkey districts.	2.39
Group E — Includes Eideneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	2.36

Price depends on lengths of pipe line haul to plant at Oil City.

PURE OIL CO.

(Effective Jan. 13, 1936)

Cabin Creek, W. Va.	$2.12
Bradford Hollow, W. Va.	2.12
Kelly Creek, W. Va.	2.12

Canada

Ontario (Sept. 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (Feb. 3, 1936):†	
Clean naphtha	2.70
Discolored naphtha	2.46
Crude oil, 50 gravity	2.32
Crude oil, 45 to 49.9	2.12
Crude oil, 40 to 44.9	1.55

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

Mexico

Panuco*	$ .895

*F.o.b. ship, based on August transactions and exclusive of production and export taxes and bar dues.

Crude Prices by Gravities

Gravity—	Oklahoma, Kansas, and Salt Creek, Wyo.	Central and North Texas	East Central Texas	North Louisiana, Arkansas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Conroe, Texas	West Texas and Lea County, New Mexico	Gulf Coast, Texas and Louisiana	Anahuac and Dickinson, Texas	Iowa and Cameron Meadows, Texas
Below 20	....	....	....	....	....	....	....	....	$.92	....	$.82
20-20.9	....	....	....	....	....	....	....	....	.94	....	.84
21-21.9	....	....	....	....	....	....	....	....	.96	....	.86
22-22.9	....	....	....	....	....	....	....	....	.98	....	.88
23-23.9	....	....	....	....	....	....	....	....	1.00	....	.90
24-24.9	....	....	....	....	....	....	....	....	1.02	....	.92
Below 25	$.86	....	....	$.78	....	....	....	....	....	....	....
25-25.9	.88	....	....	.80	....	....	....	....	1.04	....	.94
26-26.9	.90	....	....	.82	....	....	....	....	1.06	....	.96
27-27.9	.92	....	....	.84	....	....	....	....	1.08	....	.98
28-28.9	.94	....	....	.86	....	....	....	....	1.10	....	1.00
Below 29	.94	$.84	$.91	....	....	....	....	$.75	....	....	....
29-29.9	.96	.86	.93	.88	....	....	....	.76	1.12	....	1.02
30-30.9	.98	.88	.95	.90	....	....	....	.78	1.14	$1.04	1.04
31-31.9	1.00	.90	.97	.92	....	....	....	.80	1.16	1.06	1.06
32-32.9	1.02	.92	.99	.94	....	....	....	.82	1.18	1.08	1.08
33-33.9	1.04	.94	1.01	.96	....	....	....	.84	1.20	1.10	1.10
34-34.9	1.06	.96	1.03	.98	....	....	....	.86	1.22	1.12	1.12
Below 35	....	....	....	....	$.86	$.81	....	....	....	....	....
35-35.9	1.08	.98	1.05	1.00	.88	.83	$1.24	.88	1.22	1.14	1.12
36-36.9	1.10	1.00	1.07	1.02	.90	.85	1.26	.90	1.22	1.16	1.12
37-37.9	1.12	1.02	1.09	1.04	.92	.87	1.28	.90	1.22	1.18	1.12
38-38.9	1.14	1.04	1.11	1.06	.94	.89	1.30	.90	1.22	1.20	1.12
39-39.9	1.16	1.06	1.13	1.08	.96	.91	1.32	.90	1.22	1.22	1.12
40 and over	1.18	1.08	1.15	1.10	.98	.93	1.34	.90	1.22	1.24	1.12

Magnolia Petroleum Co. in the East Central Texas field pays 7 cents per barrel less than above posted prices in that field.

Edward Pfent, Sr., was elected vice president of the Inland Refineries, Inc., Drayton Plains, Mich., near Detroit, at the recent annual stockholders' meeting. Glenn O. Spitler was named secretary-treasurer; E. G. Guy, director in charge of operations and John Clark and Herman Voughtman, directors.

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E. Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Orcutt*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	....	....	....	$.80	$.76	$.76	$.77	$.78	....	....	$.70	$.70	$.70	....	....	$.70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	$.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	$.70	.74	.74	.71	$.70	....	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.82	.77	.80	....	.70	.78	.78	.72	.70	....	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	....	.91	.80	.85	.77	.84	$.78	.73	.82	.82	.74	.70	....	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	....	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	....	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	....	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.83	.81	....	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	....	.87	.88
25-25.9	1.02	.95	.82	1.03	1.05	1.11	1.03	.93	.83	....	1.02	.95	....	.89	.99	.86	.88	1.01	.98	.90	.83	....	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	....	1.05	.98	....	.92	1.03	.90	.91	1.06	1.02	....	....	....	.92	.93
27-27.9	1.10	1.06	.88	1.11	1.12	....	1.10	1.03	.88	....	....	1.02	....	.96	1.06	.95	.95	1.10	1.06	....	....	....	.95	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	....	1.06	....	.99	1.10	.99	1.15	1.10	....	....	....	....	.97	....
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	1.20	1.14	....	....	....	.99	....
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.08	1.06	1.25	1.18	....	....	....	1.01	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	1.29	....	....	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.13	1.34	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.38	....	....	....	$1.19	....	....
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1.22	1.32	1.25	1.20	....	....	....	....	1.23	....	....
35-35.9	....	....	....	....	....	....	....	1.42	....	1.35	....	....	....	1.25	....	1.29	....	....	....	....	....	1.27	....	....
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	1.31	....	....
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	1.35	....	....
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1.42	....	....	....	....	....	1.39	....	....
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	1.43	....	....
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. Santa Paula and Orcutt posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1936 High	1936 Low	Week ended Oct. 3 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
125½	75	4,500	104	94	103½	Amerada Corp.	788,675	N.P.	50cQ	10-31-36	$2.00	80	48½	55⅝	39
35⅛	26⅝	11,400	28½	27	28½	Atlantic Refining	2,664,904	$25	25cQ	9-15-36	1.00	28	20½	35¼	21½
20	14⅛	16,400	18⅜	17¾	18⅛	Barnsdall Corp.	2,131,090	$5	20cQ	11-2-36	‡.20	14¾	5⅞	10	5⅞
23⅜	14	43,300	20¾	19⅛	20¼	Columbia Gas & Elec.	11,610,036	N.P.	20c	5-15-36	.20	15¾	3⅜	19¼	6⅝
15¼	11½	41,300	13⅞	13⅜	13¾	Consolidated Oil Corp.	13,983,287	N.P.	40cQ¶	11-16-36	.25	12¼	6½	14¼	7¼
38½	28⅛	28,300	34	32¼	34	Continental Oil of Delaware	4,682,671	$5	50cQ¶	10-31-36	.62½	35	15⅛	22¾	15¾
34¾	21	6,700	25⅝	23¾	25⅜	General Asphalt	387,149	$10	25c	12-17-35	.25	22½	11¾	23½	12
12¼	6⅜	24,200	9¾	8¾	9½	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	7	1½	5⅝	2½
24¾	17¼	24,100	26⅜	23⅝	25¾	Mid-Continent Petroleum	1,843,872	$10	40cSA	6-1-36	.40	20½	9½	14¾	9⅛
26¼	16¾	1,700	20	19	20	Mission Corporation	1,399,345	N.P.	....	.....	....	17¾	10⅝	..	..
69½	19⅞	1,900	60	57	59	National Supply of Delaware	382,591	$25	....	5-15-31	....	20⅞	9	21⅛	10
17½	12⅛	17,900	13	12½	12¾	Ohio Oil Co.	6,563,377	N.P.	25cSA	6-15-36	.30	14¼	9¼	15⅞	8½
18	11¾	1,700	15⅜	14½	15¼	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.25	14	6¾	9⅜	5½
4¼	1⅜	900	2½	2⅛	2½	Panhandle P. & R.	198,770	N.P.	....	.....	....	1⅞	½	2½	⅝
49⅜	38⅛	42,900	43⅞	40¾	43⅞	Phillips Petroleum	4,152,836	N.P.	50cQ¶	9-1-36	1.25	40	13¾	20¾	13⅜
17⅛	11⅞	4,800	16⅜	16	16¼	Plymouth Oil Co.	1,050,000	$5	25c	9-30-36	.25	13	6½	16¾	7¼
24⅞	16	29,400	17⅞	16⅜	17⅞	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	17	5⅞	14⅞	6⅛
43⅝	30½	3,900	32½	30½	32½	Seaboard Oil of Delaware	1,244,283	N.P.	25cQ	9-15-36	1.00	36⅞	20¾	38⅜	20¾
24⅛	14¾	38,000	24¾	22¾	24¾	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	16½	5½	11½	6
124¼	110½	2,500	122½	120	122½	Shell Union Oil pfd.	400,000	$100	1.37½	7-1-36	....	111	63½	89	57
6¾	3½	3,300	4¼	4⅛	4¼	Simms Petroleum	461,698	$10	1.25 liq.	7-20-36	11.75 liq.	18¾	4¾	17⅛	7¼
31½	19½	6,400	29⅝	28	29¼	Skelly Oil	1,008,514	$15	....	12-15-30	....	20½	6½	11½	6
17	12½	39,300	14⅛	13½	14⅛	Socony-Vacuum	31,151,075	$15	25cSA	9-15-36	.30	15¾	10⅝	19⅞	12½
47⅝	35	13,700	36⅝	35¾	36¼	Standard Oil of California	13,014,754	N.P.	30cQ¶	9-15-36	1.00	41⅛	27¾	42⅞	26½
40⅛	32¾	13,600	38¼	37⅜	38¼	Standard Oil (Indiana)	15,215,677	$25	25cQ†	9-15-36	1.00	33⅜	23	32¾	23¼
30	25	500	27¾	26¾	27¾	Standard Oil of Kansas	200,000	$10	....	10-31-34	....	32	20	41	26
70	51⅛	32,500	62⅜	60⅛	62	Standard Oil of New Jersey	25,856,081	$25	75cSA¶	6-15-36	‖1.25	52⅜	35¾	50⅛	39¼
91	72	1,200	77¼	76⅞	77	Sun Oil	1,733,013	N.P.	25cQ	9-15-36	$1 & 7% Stk.	77	60½	74¼	51½
40	28⅞	24,100	39½	36¾	39½	Texas Corp.	9,340,069	$25	25cQ†	10-1-36	1.00	30¼	16½	29⅜	19⅝
15¼	7½	63,100	13½	11⅝	12⅞	Texas Pacific Coal & Oil	880,703	$10	25c	8-1-36	....	9¼	3¼	6½	2½
19⅛	14⅜	61,600	19⅜	17¼	19¼	Tide Water Associated	5,642,342	N.P.	15cQ	9-1-36	....	15⅞	7⅝	14⅜	8
106½	100⅝	300	104¼	103⅛	104¼	Tide Water Associated pfd.	626,221	$100	$1.50Q	7-1-36	$6.50	104½	84	87	64½
28½	20¾	5,800	22	21½	21⅞	Union Oil of California	4,386,070	$25	25cQ	8-10-36	1.00	24	14¾	20½	11½
31⅝	22⅝	2,500	29	27⅜	29	Union Tank Car Co.	1,200,000	N.P.	30cQ	9-1-36	1.20	26½	20⅞	25⅜	15⅝
5¼	2¾	800	3⅜	3⅛	3⅛	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	3⅛	1	5¾	2

*Ex-dividend. †Plus extras. ‡Also 50 per cent in stock of Barnsdall Ref. ‖Partly on account of accumulation. ¶Dividend 4/75 Mission Corp. paid 3-15-35. ¶Includes extras.

New York Curb Exchange

1936 High	1936 Low	Week ended Oct. 3 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
21	13¼	5,400	20⅜	19⅛	20	Bridgeport Machine Co.	260,000	N.P.	....	5-1-30	....	14⅛	3¾	3¾	½
50	39¾	400	45⅜	44	44¼	Buckeye Pipe Line Co.	200,000	$50	75cQ	9-15-36	$3.00	42½	30½	38	26
4⅞	1⅞	3,100	2¼	2⅛	2¼	Carib Syndicate	799,020	25c	....	.....	....	4¼	1⅝	5½	1½
124¾	105	No sales	..	..	..	Chesebrough Mfg. Co.	120,000	$25	$1.50Q	9-30-36	6.50	157	115	150	116
7⅜	3	27,600	4	3¾	3⅞	Cities Service	37,804,394	N.P.	....	6-1-32	....	3¼	¾	4¼	1¼
4	⅝	No sales	..	..	..	Colon Oil	2,200,000	N.P.	....	.....	....	2⅛	½	3¼	½
4⅛	1½	5,500	2½	2⅛	2⅜	Cosden Oil	399,687	$1	....	.....	....	1½	¼	3⅞	½
34⅞	19⅞	39,800	28	25⅛	27⅝	Creole Petroleum	6,974,356	$5	25c	7-15-36	.20	23¾	10	14⅜	9⅝
12	9	2,800	12¼	10⅞	12¼	Darby Petroleum	351,390	$5	25cSA	7-15-36	.50	8⅞	4	7½	4⅛
4⅝	1⅞	1,700	4⅛	3⅝	4⅛	Derby Oil & Refining	263,162	N.P.	....	.....	....	2	¾	2¼	1
44	39	250	43¾	41	43¾	Eureka Pipe Line	50,000	$50	$1Q	11-2-36	4.00	38	33¼	37	30
104¾	72	8,500	101½	98½	99½	Gulf Oil Corp.	4,538,101	$25	25c	10-1-36	....	74¾	50¼	76¾	49¾
76½	57	5,900	63⅜	61⅝	63⅜	Humble Oil & Refining (new)	8,923,935	N.P.	50c†	10-1-36	1.25	64	44	49½	33¼
24½	20	10,800	21¼	21	21⅛	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	6-1-36	1.25	22½	15⅜	17⅞	12⅝
9½	5½	700	9½	9¼	9½	Indiana Pipe Line	300,000	$10	40cSA†	11-14-36	.35	6⅛	3⅝	6⅞	3⅝
39⅝	32⅞	9,900	35⅞	34¾	35⅞	International Petroleum	14,247,088	N.P.	$1.25†‡	6-1-36	2.50	39¾	28	33⅜	19⅜
15⅜	9⅞	9,300	12⅛	11⅝	11⅞	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	6-15-36	.10	11⅜	4⅜	5	2⅛
15½	7⅜	1,800	14⅜	14	14¼	Lion Oil Refining	270,000	N.P.	50c	10-15-36	....	8⅛	3½	6	3⅜
14¼	9⅞	18,700	14⅛	13½	14⅛	Lone Star Gas	5,382,723	N.P.	20cSA	8-15-36	.30	10⅞	4½	8⅜	4¼
8⅜	5	4,800	5¾	5⅜	5⅜	Mountain Producers	1,682,182	$10	30cSA	7-1-36	.90	5¾	4½	5½	4
23	17⅝	2,800	20¼	19¼	20	National Fuel Gas	3,810,183	N.P.	25cQ	10-15-36	1.25	20	11¾	18⅛	13⅛
15¾	9¼	600	11⅝	11⅜	11⅝	National Transit	509,000	$12.50	40cSA	6-15-36	.75	10⅝	6¾	9½	7
4½	2⅞	1,200	3⅝	3⅛	3⅝	New Bradford Oil	1,445,202	$5	10cSA	5-15-36	.20	3¼	2	2½	1¾
6⅝	1⅝	700	3⅜	3¼	3¼	New Mexico and Arizona	1,000,000	$1	....	.....	....	2½	1	2¾	1
6¼	4½	100	5⅛	5⅛	5⅛	New York Transit	100,000	$5	15cSA	4-15-36	.30	4⅞	3	4¾	3
9¼	4⅞	400	9⅛	9	9⅛	Northern Pipe Line	120,000	$10	15cSA	7-1-36	.50	8	5¼	7	4⅝
6⅝	3¼	38,700	5⅞	5⅛	5⅞	Pantapec Oil	1,608,700	N.P.	....	.....	....	4⅜	1¼	2⅝	⅞
19¼	4½	4,900	15⅜	14¾	15	Root Petroleum Co.	336,045	$1	25c	8-1-36	....	5	1½	..	..
4¾	1⅞	300	3¼	3⅛	3⅛	Ryan Consolidated	296,931	N.P.	....	.....	....	2½	⅝	3⅜	⅞
10	5¾	10,800	6⅛	5¾	6	Salt Creek Producers	1,496,859	$10	40cSA	6-30-36	1.20	7½	5½	7⅞	5½
40⅞	32½	1,500	40¼	39¼	40	South Penn Oil	1,200,000	$25	60c†	9-30-36	1.35	34½	21⅝	26½	17½
7⅞	3¼	100	4¼	4¼	4¼	Southern Pipe Line	400,000	$10	15cSA	3-2-36	.30	5	3⅞	5½	3½
60	54	No sales	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1.00Q	10-1-36	5.00	56	44¼	47	41
23⅜	17⅛	2,200	18⅞	18⅝	18⅝	Standard Oil of Kentucky	2,604,790	$10	35c	9-15-36	1.25	24	18	18⅜	14⅝
14⅝	11	200	12	12	12	Standard Oil of Nebraska	188,403	$25	....	6-20-34	....	12	7¾	16⅞	8¼
36¼	21¾	1,600	31	29⅞	30⅞	Standard Oil of Ohio	753,740	$25	25c	10-15-36	....	23⅝	11½	28½	12¼
5	2⅝	5,000	3½	3⅜	3½	Sunray Oil	1,610,810	$1	....	4-15-31	....	2¾	⅞	2	††
9⅜	5⅜	1,700	5⅝	5⅜	5½	Texon Oil & Land	336,028	N.P.	15cQ	9-30-36	.60	6⅞	5	11	4⅝
7½	4⅜	14,900	6	5⅛	6	Texas Gulf Producing Co.	888,087	N.P.	....	12-29-34	....	4⅜	2½	7	3⅝

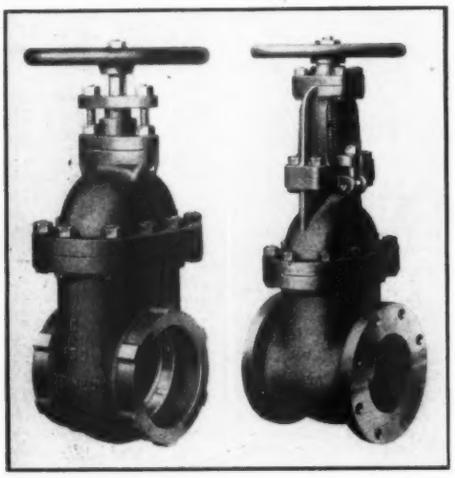
*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups

NEW OR IMPROVED EQUIPMENT

Metal Used in Kennedy Valve Gives It Unusual Strength

A new line of standard iron-body wedge gate valves developed by the Kennedy Valve Manufacturing Co., Elmira, N. Y., is made of metal of



particularly dense structure. On test by an outside laboratory is said to have proved more than 50 per cent stronger than ordinary cast iron. Further to insure strength and rigidity, the bodies are of oval section, with well-rounded corners. The flanges and bolts are heavy, and ribbing is provided at the flanges on the larger flanged-end valves and at the yokes and caps of outside-screw-and-yoke valves.

There are no studs, and all bolts have the nuts above the flanges, with ample room for standard open-end wrenches. Both nonrising stem and outside-screw-and-yoke types have special provisions to facilitate repacking. For example, the latter type has eye bolts at the stuffing-box which swing out of the way, with washer-nuts which eliminate the annoyance of loose washers, packing-gland with slotted flange bolts, and shelves on the inside of the yoke to hold the gland out of the way. The stuffing-box bolts and nuts are rust-proofed.

Heavy bronze bushings are used wherever the stem passes through a cast-iron part, as at the yoke cap, packing-gland and stuffing-box. These bushings prevent corrosion and scoring of the stem which might make operation more difficult and wear out the packing quickly.

Here and There With Men Who Manufacture Equipment

Frank C. Miller, formerly associated with the Detroit sales office, has been appointed manager of sales in the tin plate division of Republic Steel Corp., succeeding George E. Totten, who resigned.

Paul McGivern, manager of the Tulsa branch of Baker Oil Tools, Inc., of Huntington Park, Calif., was host for the third successive year to members of the Purchasing Agents Association of Tulsa. The dinner-meeting was held on the roof garden of the Tulsa Club.

The Goetze Gasket & Packing Co., Inc., New Brunswick, N. J., has completed another addition to its plant, which was originally located on the present site in 1911. This is the fourth addition since 1928.

Everett Chapman, formerly vice president of Lukenweld, Inc., Coatesville, Pa., has been elected president, succeeding G. Donald Spackman, recently promoted to general superintendent of Lukens Steel Co. of which Lukenweld is a subsidiary. Robert J. Whiting, formerly superintendent of Lukenweld, Inc., has been elected vice president.

The Mid-Continent Supply Co. has opened a sales office in the Magnolia Building, Dallas, Tex., in charge of H. H. Brown.

Dick Newbolt and "Butch" Stout, formerly with the Fluid Pack Pump Co., have organized the Southwestern Supply Co. in Seminole, Okla. They have the state right for the sale of fluid seal pumps.

The Tokheim Co., Cedar Rapids, Iowa, manufacturer of tank gauges, flame arresters, vents, outlet valves and condensers, is now represented in Tulsa by Sam Smith, 18 North Peoria Avenue.

The Ensign Carburetor Co. of Huntington Park, Calif., has appointed Koepsel & Love, of Salt Lake City, Utah, distributors in that territory for Ensign equipment. Koepsel & Love will stock the full line of Ensign gasoline, butane and natural-gas carburetors and parts and will be equipped to give complete service.

L. B. MacGregor Head of New Concern Handling Oil Tools

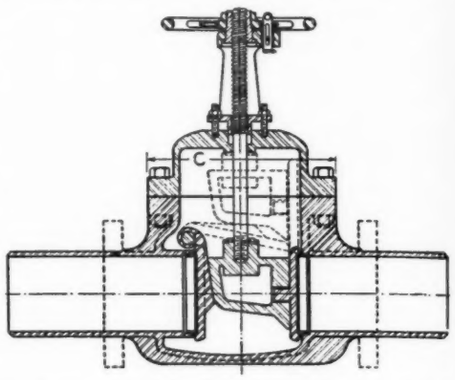
The Transport Oil Tool Co., under the management of L. B. MacGregor, has been established at 905 Obispo Avenue, Long Beach, Calif. This company has exclusive sales rights for all foreign and domestic fields, with the exception of California,

L. B. MacGREGOR

on Shull Perforating Co. tools and Alford sleeve-action cement and acid dump bailers. The Houston Oil Field Material Co. has been granted sales rights on the Shull hydrostatic bailer and swab for Louisiana, Arkansas and the southeastern half of Texas. Mr. MacGregor has just returned from a business tour of Texas and Oklahoma.

Valve Designed to Withstand Rough Usage in Oil Fields

The Wheatley combination check- and gate-valve, introduced by Wheatley Brothers Pump & Valve Manufacturing Co., Sand Springs Road, Tulsa, is designed for all oil installations, but especially for applications which subject the valve



to destructive duty. The valves come in all-steel construction for high pressure and in cast-iron for low pressure. They are designed for either screwed or flanged connections or plain for welding. A special handwheel locking device is provided in sizes from 4 to 12 inches.

These valves, according to the manufacturer, have made exceptional records for years of trouble-free, low-cost service in the most destructive duty known to the oil industry. When closed this unit is a gate-valve, when open it is a combination gate-valve and check-valve. It is adjustable from the outside so that the check-valve unit can be raised and left stationary to allow the pumping of fluid in either direction. Recently the valve has been improved to allow hot tapping: that is, tapping through the valve with pressure on the pipe line. Economy is effected by means of the fact that the combination valve takes the place of a regular gate-valve, a regular check-valve and necessary fittings. Recent installations have been made where space did not allow for both gate-valve and check-valve.

New England Office Opened

A new England office for consulting and sales engineering service to those having problems of instrumentation in manufacturing processes, laboratories, power plants or educational institutions, has been opened by Leeds & Northrup Co. in the Chamber of Commerce Building, 80 Federal Street, Boston, Mass.

O.I.C. Valve Made of Heavy Bronze

The "O.I.C." Figure 97 standard solid-wedge slip-on disc-type gate-valve with rising stem, recommended for steam, water, oil and gas; is made of an exceptionally heavy high-grade bronze. The stem is of manganese bronze.

The valve is provided with ample space for packing and can be packed while under full pressure. It is also equipped with a packing gland. The valve has full-length pipe threads of full area. The hand-wheel is malleable, of nonheating design.

E. L. Stevens Is Now Member of Union Wire Rope Corp. Staff

E. L. Stevens, widely known in the oil country as "Steve," has joined the sales staff of the Union Wire Rope Corp. as sales manager of the company's commercial department. This department

E. L. STEVENS

handles sales to the building and construction field and for general industrial purposes. Mr. Stevens was with Wickwire Spencer for years and later served the Republic Supply Co. in sales of Edwards wire rope. His headquarters will be at the company's general offices and factory, Twenty-first and Manchester, Kansas City, Mo.

Bulletins, Booklets and Other Literature for the Trade

The current issue of the Harvester World, published by International Harvester Organization, Chicago, devotes its 64 pages to material concerning Cyrus H. McCormick, retired chairman of the board of the International Harvester Co., who died last May. Biography, tributes, writings of Mr. McCormick himself and an unusually interesting collection of pictures make the booklet not only a story of an industrial leader, but of an important section of industry itself in a half-century of marvelous development.

One of the most attractive pieces of trade literature of the month is an 80-page booklet on pipe-coating specifications for field application prepared by the Barrett Co., 40 Rector Street, New York. Excellent pictures help to make the booklet a manual on the subject of pipe coating.

The Griscom-Russell Co., 285 Madison Avenue, New York, is offering an 8-page illustrated bulletin on the twin G-fin section, described as a "heat exchanger with compensated transfer surface for heating or cooling fluids of low heat conductivity."

The Brown Instrument Co., Philadelphia, Pa., has published a new catalog on Brown air-operated controllers for the control of temperature, pressure, flow and liquid level. It covers the company's complete line of these instruments.

Five bulletins, each covering a type of the company's induction motors, are announced by the General Electric Co., Schenectady, N. Y. A sixth bulletin describes the type KR totally enclosed hoist motors.

The current issue of Nickel Cast Iron News, published by the International Nickel Co., 67 Wall Street, New York, contains among its 12 pages of interesting material an article on "Wear-Resistance and Pressure-Tightness in Oil-Well Equipment."

A compilation of some of the ways of making gas-burner installations to various types of heating boilers is presented in a 40-page catalog obtainable from the Webster Engineering Co., Tulsa.

An "Operator's Instruction Book" of 16 pages, covering Landis stationary pipe die-heads and Landis pipe-threading and -cutting machines may be obtained by writing the Landis Machine Co., Waynesboro, Pa. The booklet contains information regarding the grinding and setting of chasers for use in these die-heads and machines.

Chiksan Oil Tool Co., Ltd., Fullerton, Calif., has issued a folder describing its line of disc bits, reamers, hole-enlargers, all-steel rotary hose and all-steel cement joints.

A 32-page illustrated catalog covering McDonnell boiler-water level controls contains also an interesting discussion of why such controls are a sound investment. The booklet is sent on application to McDonnell & Miller, Wrigley Building, Chicago.

Engineers and operators should be interested in a hot-oil and refinery pump catalog prepared by the United Iron Works, 580 Second Street, Oakland, Calif., and incorporating an article on hot-oil pump design and construction.

Columbian Cop-Nic Steel Tank Made for Sour-Oil Fields

The new Columbian Cop-Nic bolted steel tanks, introduced by the Columbian Steel Tank Co., Kansas City, Mo., are made from special steel sheets which have not only a high copper-bearing content but in addition nickel and other rust-resisting elements. A tighter, smoother coating of galvanizing is claimed. While the outer surface is pure zinc, the under surface is really a zinc-iron alloy, which progresses from pure zinc at the outside to pure iron on the inside.

Columbian already has shipped a number of carloads of these tanks into the sour crude district. The trademark shown here is conspicuous on each sheet and side wall section. Cop-Nic identifies a special steel developed for the sour-oil fields or in industry where chemicals attack ordinary blue annealed steel tanks.

The manufacturers say that the surface of the base metal is prepared for the special galvanizing process with a uniform etching, thus making it unnecessary to depend on accidental variations in the sheet surface which produces thick and thin spots in the coating.

H. A. Wienecke Sales Engineer for Gaso Pump and Burner

The Gaso Pump & Burner Manufacturing Co. has added to its Tulsa staff as sales engineer H. A. Wienecke, of Tulsa. In 1925 Mr. Wienecke received the degree of mechanical engineer from

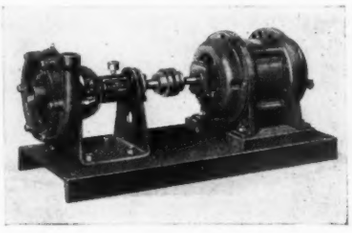
H. A. WIENECKE

Washington University, St. Louis, Mo. He had worked as a draftsman for the Prairie Pipe Line Co. and after graduation he continued with the Prairie, first as clerk to R. G. Lewis, master mechanic, then as assistant master mechanic engaged in field work. From 1932 to 1935 he was engineer and buyer in the purchasing department. A year ago he resigned to go with the Continental Supply Co. as a machinery salesman. Mr. Wienecke's special training and wide experience in the oil pipe line business as engineer and salesman have especially fitted him for his new position with the Gaso company, which has specialized for 20 years in building pumps for the oil industry.

Small Centrifugal Pumps Are Announced by Worthington

A small high-quality centrifugal pump is announced by Worthington Pump & Machinery Corp., Harrison, N. J. Simplicity of design results in fewer wearing parts and low maintenance costs. The compactness of the unit makes it easily adaptable to almost any installation within its head capacity range.

The pumps are furnished with direct motor drives or with pulleys for belt drive. The motor sizes range from one-third to 3 horsepower, delivering from 10 to 130 gallons per minute with heads from 10 to 100 feet. The shaft is supported by two ball bearings enclosed in a dirtproof and moisture-proof housing. The suction head is easily removable for inspection of the pump's interior. A choice of standard, all-iron, and all-bronze fittings is offered.



Rocky Mountain Fields

(Continued from Page 82)

Texas Co. No. 3 Tribal-122, CSL SW SW sec. 6-32n-5w. T.D. 2,933 ft.; 1,800 ft. of oil; swbg.
Vern Johnson No. 1 Tribal-118, C SW SW sec. 1-32n-6w, T.D. 2,900 ft.; fsg. baller.
Texas Co. No. 5 Tribal-122, CNL SW SW sec. 5-32n-6w. Bldg. rig; (first report).
Texas Co. No. 2 Tribal-121, C NE SE sec. 36-33n-6w. Drlg. 308 ft.
Texas Co. No. 4 Tribal-122, C SE SE sec. 6-32n-5w. Drlg. 2,085 ft.; Colo. 547 ft.
Texas Co., sec. 9 Unit 1, C SE SW sec. 9-32n-5w. Loc.; (first report).

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15w. Drlg. 1,451 ft.

Liberty County

Western Natural Gas Co. No. 1 State, SE SE NW sec. 16-37n-4e. Drlg. Colo. sh. 1,300 ft.

Musselshell County

Geo. Gregory et al No. 24-A Govt., NW SW NW sec. 25-11n-24e (Devil's Basin). Drlg. 140 ft.

Petroleum County

Homestake Oil Co. No. 24-A Govt., C NW sec. 10-15n-29e. Drlg. 1,550 ft.; second Cat Creek dry.
H. C. Rowland No. 1 Kallapel, NE NE SE sec. 35-14n-25e. Drlg. 400 ft.

Phillips County

Montana-Dakota Utilities Co. No. 1 Garrison, SW SE SE sec. 6-31-34e (Howdoin gas field). Drlg. 660 ft.; cmtd. 8¼-in. at 190 ft.

Pondera County

Clinch Pet., Ltd., No. 1 Holan, NW SW NW sec. 12-23e-6w. S.D. 2,200 ft.
Gordon Campbell No. 1 Hughes, NW NE NW sec. 12-30n-4w. S.D. 2,345 ft.
Jones-Chambers No. 1 Ericson, SW SE SW sec. 3-27-4w. Bldg. drk.
Montana Power Gas Co. No. 1 Berger, C NE sec. 31-31n-4e. T.D. 50 ft.; strtng. hole.

Sheridan County

Cheyenne O. & G. Co. No. 1 Olson, SE SE SE sec. 14-35n-53e. Drlg. 1,615 ft.

Teton County

The Bynum district in Teton County is to have another test in R. C. Tarrant No. 1 Jones, C SE NW section 3-26n-6w, which is moving in materials. It is located 1½ miles west of the old Midwest Refining Co. No. 1 Scott, SE SE NE section 2-26n-6w, drilled in 1922 to 2,503 feet. This well had a show for 10 to 12 bbls. a day in the Ellis-Madison at 2,468-78 feet. It is a mile to the southwest of L. B. O'Neil No. 1 Jones, NE NE SE section 34-27-6w, which was drilled to 2,650 feet in 1926. This well had a show for 10 to 12 bbls. in the Ellis-Madison at 2,360-65 feet.

R. C. Tarrant No. 1 Jones, C SE NW sec. 3-26n-6w. M.I.M. (first report).

Toole County

One completion and two new operations were reported in the Kevin-Sunburst field. Clara Oil Co. No. 9 Waite, SE SE NE section 25-35n-2w, had the pay at 1,490-1,515 feet, total depth 1,550 feet, but has not been tested after acidizing.

Big West Oil Co. No. 3 Dalquist, SE NE NW section 21-35n-3w, in the west end where there is considerable activity, which flowed at the rate of 300 bbls. a day from the contact topped at 1,790 feet, failed to hold up and tested only 15 bbls. a day after acidizing. It is drilling deeper at 1,795 feet.

Stanley Gray No. 3 Government, NW NW SW section 12-35n-3w, in the same area, which pumped 160 bbls. initial a month ago, is still making around 100 bbls.

Agen & Krause Co. No. 1 Krause, SE SE SE sec. 9-35n-3w. Loc.; (first report).
Agen & Goeddertz No. 3 State, NE SW NE sec. 16-35n-3w. Drlg. 900 ft.
Dr. B. A. S. Aronow No. 3 Govt., NE SE NW sec. 21-35n-3w. Drlg. 400 ft.
Alexander-Sor Oil Co. No. 1 Strange, NE SE SE sec. 31-35n-3w. Drlg. 1,585 ft.
Cassidy, et al No. 3 Carlson, CNL SW NE sec. 22-35n-2w. Drlg. 900 ft.; (first report).
Par Oil Co. No. 1 Reynolds, SW NE SW sec. 31-33n-4w. T.D. 2,200 ft.; fshg.
Geo. C. Hoyt No. 4 Govt., NW SW NE sec. 28-35n-1w. C.O., 1,385 ft. after shot; (first report).
Coolidge & Coolidge No. 1 Denzer, CEL SW NW sec. 11-35n-3w. Drlg. 1,640 ft.; Sunburst dry at 1,590-1,610 ft.
Nopstad & Van der Pas No. 2 Thompson, C SE SW sec. 2-35n-3w. Drlg. 1,505 ft.
Pfabe & Engleking No. 1 Hurley, SW NE NW sec. 8-34n-2w. R.U.; (first report).
Frazier & Smith No. 1 Van Note, CWL SW NW sec. 30-35n-2w. Drlg. 900 ft.
Munger No. 1 Peterson, NW NW SW sec. 8-35n-2w. Drlg. 1,548 ft.; Sunburst at 1,390-1,440 ft.; est. 7 to 8 B.P.D.
No Jack Oil Co. No. 1 Lashbaugh, NE SW NW sec. 34-35n-2w. Spdg. 60 ft.
New Era Fuel Co. No. 4 Halter, CEL NW NE sec. 21-35n-2w. Drlg. 1,475 ft.; (formerly Superior Oil).
C. Leonard Smith No. 1 Graves-Hines, SW SE sec. 20-33n-2e. Cmtg. 6¼-in. at 785 ft. before drlg. into gas sd.

NEBRASKA

Dawes County

Stephens Oil Corp. No. 1 Palmer, C NW SW sec. 1-32n-50w. Drlg. 1,520 ft.; 12½-in. at 856 ft.; top Niobrara 590 ft.; top Greenhorn L. at 1,425 ft.

Red Willow County

C. W. Kelly et al No. 1 Bower, SE NW SE sec. 2-2n-29w. S.D. 1,450 ft.

Sioux County

J. M. Huber Corp. and United Producers, Inc., et al No. 1 Morgan, C SW SW sec. 32-35n-56w. Drlg. 1,800 ft.; 12½-in. at 1,400 ft.; top Niobrara 1,032; top Greenhorn L. 1,575 ft.

Franklin County

Wm. Steinlee No. 1 SE NE SE sec. 25-1n-15w. Loc.

Grant County

Byrd-Frost, Inc., and Magnolia Pet. Co. No. 1, NE NE NW sec. 11-24n-38w. T.D. 1,600 ft. in Tertiary; U.R. stuck D.P. at 1,225 ft.

UTAH

Daggett County

Mountain Fuel Supply Co. No. 1 State, NW SE SW sec. 16-3n-24e. Drlg. 5,630 ft.; tested at 5,447-5,552 ft.; no results.

Emery County

California Co. No. 1 Palm Unit, C SW SW sec. 22-23s-11e. T.D. 2,285 ft.; circulating.

Grand County

Columbia Crude Corp. No. 1 Rath, NW SW sec. 12-25s-20e. Drlg. 1,558 ft. in lower Hermosa.
Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22s-22e. Drlg. below 4,900 ft. in red beds.

Utah County

Diamond Oil Co. No. 4 Govt., CSL SE NW sec. 16-8s-5e. T.D. 3,990 ft.; fsg. bit.

Union Oil Field Organization

Changes announced in the Union Oil Co. field department by Edmund Jussen, manager of field operations, include: F. C. Boyd, formerly drilling superintendent, appointed general superintendent of drilling; Ted Miles, formerly assistant general superintendent, northern division, appointed superintendent of production, Valley division, at Bakersfield; W. H. Watkins, formerly production foreman, promoted to superintendent of production, Coast division, at Orcutt; W. S. Eggleston, formerly chief development engineer, appointed chief petroleum engineer at Los Angeles.

CLASSIFIED ADVERTISING

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Brokers—Salesmen

Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Securities and Exchange Commission. Inquiries invited.

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Paul Brown Bldg., St. Louis, Mo.

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15 years of experience.
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PRODUCING OIL ROYALTIES
for dealers
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Bought — Sold — Wholesale.
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Royalties—Production

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

FOR SALE—ROYALTY IN LEA & ROOSEVELT COUNTIES N. MEX. under major oil company leases. J. W. Wallrich, Lovington, New Mex.

F. A. SANSOME
Maintains a Complete Trading Organization for Brokers, Banks and Dealers
In
Oil Royalties
522 Fifth Avenue, New York, N. Y.

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Royalties Quoted Dealers.
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Perrine Bldg., Oklahoma City, Okla.

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Before disclosing your invention to anyone, send for blank form:
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Instructions "How to Establish Your Rights" and complete information FREE!
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Oil Industry Printing

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Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

For Sale—Maps

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Oil Map Publisher
330½ Milam St. Phone 2-6533
Shreveport, Louisiana

Oilfield and County Ownership Maps. New price list on request. Send $1.00 for map of Texas and eastern New Mexico.
ZINGERY OIL MAP CO.
Fair Bldg. Fort Worth, Texas

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In every field of human endeavor, he that is first must live in the light of publicity. The reward is wide-spread recognition; the punishment, fierce denial and detraction. When a man's work becomes a standard, it also becomes a target of the envious few. So it is with the Physico Method of locating oil and gas deposits. That which is good makes itself known, no matter how loud the clamor of denial. That which deserves to live—lives. The Physico Method of locating oil and gas deposits advances steadily onward in the face of the skeptical pessimist, who never develops, but destroys honest efforts.

After a very busy summer, making surveys and mapping oil and gas deposits in Michigan, Ohio and Pennsylvania, where leasing and drilling plans are now in progress, due to many requests, we are planning a trip to the South West this Fall. We solicit correspondence to arrange personal interview.

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CORPORATION
503 Cuyahoga Building
Cleveland, Ohio

Ranches and Farm Lands

160 ACRES unimproved farm land $4 per acre. 1,532 acres ranch proposition, plenty of grass and water $4 per acre. 483 acres, 455 in cultivation, heavy chocolate loam, very productive, good improvements $40 per acre. Luther Calahan, Idabel, Oklahoma.

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FOR SALE: 5,000 acres valley ranch, highly improved on Cimarron River in New Mexico. Headquarters ten-room stone stucco house, modern plumbing. Apple orchard. Large concrete dam on river. Free irrigation water rights. 150 acres irrigated alfalfa. 350 acres in cultivation. Fine grass all over ranch. Deer hunting in canyons. Mile high altitude. Situated on U. S. Highway No. 64. Recently leased for oil development. Must sell, foreclosure within sixty days. Owner. Address Box H-460, The Oil and Gas Journal, Tulsa, Okla.

Business Opportunities

GEOLOGIST desires connection on percentage basis plus expenses. Highest credentials. Address Box G-823, The Oil and Gas Journal, 415 Lexington Avenue, New York City.

New method recovers fine gold. Will revolutionize placer mining. Need partner to finance commercial plant. H. C. Petersen, Route 5, Omaha, Nebr.

Gold-Copper Mine, 6 Pat. claims, 102 acres, Hartford district, Cochise Co., Arizona. 100% sale by reputable estate liquidation. Qualified principals only. $30,000 invest. should return 200% annually. Owners rep. Louis O. Macloon, 148 E. 48th St., New York City.

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KEY HEADERS, sizes for 3½" and 4½" OD tubes, ideal for cracking, reforming, viscosity breakers, etc. Large stock up-to-date refinery equipment. Priced for quick sale.

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Terms to suit.

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SEVERAL USED ROTARY RIGS

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Several Steel Derricks & Rotary Equip.

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Westcott, Foxboro and Emco Orifice Meters. Large Capacity Iron Case, Sprague and Ironclad Positive Meters. Geo. R. Milner, Okmulgee, Oklahoma.

FOR SALE—Standard Cable Drilling Tools. 2—12x12 Out-board Steam engines. 2 Boilers—66 and 60 H.P. Tools and equipment from 5⅞" to 24" hole, less pipe, cordage and belts. W. A. BLACK, Owner, Box 323, Pampa, Texas.

BARGAINS—Demonstrator Arc Welders. Gasoline and electric drive. 30 days' trial. Easy terms if desired. Write Ken's Exchange, Box OG-1061, Troy, Ohio.

FOR SALE

3—14x7¼x14 Gardner-Denver Slush Pumps. 2—20" Oilwell Imperial Rotaries, Roller Bearing. 1—8" Lucey Upright Draw Works. Complete with braces, Head Board, Drum Skid, Chains and Chain Guards. This material located at Rodessa. P. O. Box 1603, Shreveport, Louisiana.

FOR SALE—42 insulated TANK CARS reasonably priced good condition capacity 8,000 gallons. The Henderson Co., 604 Oliver-Eakle Bldg., Amarillo, Texas.

FOR SALE

2—225 H.P. Miller-Watts Gas Engines direct connected to 17¼x24 Compressors. 800 ft. 10" 40 lb. Used LW Casing. Elliott Machine & Supply Co., Depew, Oklahoma.

2—300 Ampere Lincoln Welders, speed control, A-1 condition. Service Co., 3732 Cedar Avenue, Cleveland, Ohio.

Equipment Wanted

TANK CARS WANTED—Responsible refinery wants to buy direct from owner 50 to 100 clean 8,000 gallon tank cars, not over 12 years old, equipped with cast steel side frames, delivered free of excess empty mileage at Kansas City or St. Louis. Advise builder, year built and complete specifications. H. W. Lee, P. O. Box 601, 1134 Hunt Building, Tulsa, Oklahoma.

Will purchase twenty-five class 2 or class 3 tankcars eight or ten thousand gallon capacity with welded coils or without. Will pay cash. Address Box H-470, The Oil and Gas Journal, Tulsa, Okla.

Leases—Production

DEALERS and SALESMEN—Offer cheap leases in hot spots around drilling wells on good geology. Address MANNING & COMPANY, Dan Waggoner Bldg., Fort Worth, Tex.

NEW DRILLING campaign started. Rush to Arkansas. Hempstead & Nevada most active counties. Write for list of Leases & Royalties. Close in. W. A. Feild, 321 W. 16th St., Little Rock, Arkansas.

FOR SALE—½ int. in 1,000 a. with well to be completed in the Trenton Rock, S.W. Ind. La Salle basin. Present geol. appr. loc. near prod. F. M. Pierson, Drawer 748, Terre Haute, Ind.

I own 3,000 acres free in N. Pittsburgh & Atoka Cos. 40 to 1,000 A. tracts, no trades. Cash sale, lease or royalty. $5 to $25 per A. Townsite on 2 R.RS. near production. J. E. Cavanagh, Baker, Ore.

Shallow Oil-gas eastern Kansas 700 to 900 feet; six producing zones; proven area. Will furnish lease and drill well, $1,500. Full particulars to brokers, others. Mr. Budd, Osawatomie, Kans.

Leases—Production

OWNER of oil and gas leases near several wells, being drilled on geophysical structures, will exchange 20 acres near each well, for 20 acres near other wells, even exchange. Leases must be on good geology and reliable operators. Address Box H-455, The Oil and Gas Journal, Tulsa, Oklahoma.

LANDS Leases, Royalties, anywhere, bought, sold. Lands, $2 acre, up. Leases 25c acre, up. Advise needs. American Investment Co., Houston, Texas.

NORTH Louisiana is oil active, write for drilling blocks, leases, production. G. Lucas, 208 Milam St., Shreveport, La.

WANTED—Core Drilling of any nature, anywhere. Have latest equipment. Will take interest deals with any reliable independent operators. Paul R. King, Box 341, Hutchinson, Kans.

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125—55,000-bbl. storage tanks at great saving. Prices quoted on request for tanks standing, cut down, or reerected on your grade. Have all other sizes available. All tanks strictly guaranteed.

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SONKEN-GALAMBA CORPORATION

64 North Second St. Kansas City, Kansas.

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DEALERS ONLY

Sell high class Oil Leases near drilling well. These Oil Leases offer you and your clients the opportunity of immense profits. Write or wire for particulars.

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Oklahoma City, Okla.

25,000 acres Texas leases and well; ¼th interest $10,000. Quick action. W. F. Plagenz, E-110 Lee Ave., Cleveland, O.

Situations Wanted

PURCHASING AGENT

Or ACCOUNTANT, fifteen years experience purchasing for Mining and both Producing and Refining Oil Companies. Twelve years Accounting Railroad and Financial Institutions, Address Box H-451, The Oil and Gas Journal, Tulsa, Okla.

SITUATION WANTED—Salesman with 20 years' experience in oil and gas sales work in the southwest desires connection with manufacturing concern. Available October 1st. Salary preferred. References. Address Box H-431, The Oil and Gas Journal, Tulsa, Oklahoma.

Refinery process engineer-economist 10 years experience design and operation. Now employed. Wants position with more work. Address Box H-471, The Oil and Gas Journal, Tulsa, Okla.

Situations Wanted

CIVIL ENGINEER, surveyor, over nine years with an oil company in South America, seeks similar position. Mapping, topographical surveys in connection with civil engineering works; drainage, flood control, roads, railroads. Also experience on reinforced concrete work. Address Box H-454, The Oil and Gas Journal, 415 Lexington Ave., New York City.

TAX SPECIALIST. Graduate engineering, accounting and law, fifteen years experience oil taxation and valuation, government, public and private practice. Available as head or assistant, tax department of oil company. Address Box H-472, The Oil and Gas Journal, Tulsa, Oklahoma.

First class draftsman desires position. Steel, concrete, refinery and general engineering experience. Address Box H-474, The Oil and Gas Journal, Tulsa, Okla.

Connection with concern desiring to contact oil refining industry for sale of equipment or processes. Have wide acquaintances and excellent contacts among refiners in United States and Canada. Have many years experience in selling this trade. Address Box H-473, The Oil and Gas Journal, Tulsa, Oklahoma.

Help Wanted

WANTED—An experienced tank man, one that understands welded tank work and must be experienced in erecting tanks. Pipe & Mining Supply Co., Box 1431, Denver, Colorado.

WANTED—Draftsman—College graduate in electrical engineering. Very desirable that applicant have experience in instrumentation. State degree received, school attended, past experience, age, telephone number and send photograph if available. Address Box H-452, The Oil and Gas Journal, Tulsa, Oklahoma.

SCOUTS and ENGINEERS—Learn how Big Chief System locates structures. Certain, scientific, inexpensive. Gas & Oil Research Co., Cleveland, Ohio.

Mailing Lists

MAILING LISTS

Royalty Investors, by Deed. Retail royalty brokers; both by States. Write for folder.

Also, large oil company lease buyers in Tulsa, Wichita, Houston, Dallas and Shreveport. $1 for each city. Oil Industry Mailing List Co., 909 Tulsa Loan Bldg., Tulsa, Okla.

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1 Inch	*52*	*times*	*3.50 per inch*

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Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgment is made, and proofs cannot be shown in advance of publication.

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3 Lines	*$1.05*	*$1.80*	*$2.25*	*$3.30*	*7 Lines*	*$2.45*	*$4.20*	*$5.95*	*$7.70*
4 Lines	*1.40*	*2.40*	*3.40*	*4.40*	*8 Lines*	*2.80*	*4.80*	*6.80*	*8.80*
5 Lines	*1.75*	*3.00*	*4.25*	*5.50*	*9 Lines*	*3.15*	*5.40*	*7.65*	*9.90*
6 Lines	*2.10*	*3.60*	*5.10*	*6.60*	*10 Lines*	*3.50*	*6.00*	*8.50*	*11.00*

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

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Tulsa, Oklahoma

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Warren Petroleum Company
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Wheeling Machine Products Co.
Wickwire Spencer Steel Company
Wilson-Snyder
Williams & Co., J. H.
Williamsport Wire Rope Co.
Wilson Manufacturing Co.
W. K. M. Co., Inc.
Worthington Pump & Machinery Corporation

Y

Yale & Towne Mfg. Co., The
Young Engine Corp.
Youngstown Sheet & Tube Co., The

Oil Man's Calendar

October

12-13—Chicago, National Association of Lubricating Grease Manufacturers, Stevens Hotel.

13—Tulsa, regional technical meeting, W.P.R.A.

16-17—San Antonio, Tex., A.A.P.G., San Antonio section, annual meeting.

25-30—Atlantic City, N. J., first annual convention, Association of Gas Appliance & Equipment Manufacturers. Annual convention American Gas Association, Atlantic City Auditorium.

27—Wichita Falls, Tex., regional technical meeting, W.P.R.A.

27-29—Chicago, National Oil Marketers Association annual convention, Stevens Hotel.

November

3—Shreveport, La., regional technical meeting, W.P.R.A.

5—Los Angeles, Calif., California Natural Gas Association, fall meeting.

4-5—Indianapolis, Ind., Indiana Independent Petroleum Association, fall meeting.

5-6—Los Angeles, Calif., A.A.P.G., Pacific section, annual meeting.

9-12—Chicago, American Petroleum Institute, 17th annual meeting, Stevens Hotel.

20—Tulsa, annual meeting, Kansas-Oklahoma division, Mid-Continent Oil and Gas Association.

November-December

30-Dec. 1—Oklahoma City, Okla., Independent Petroleum Association, Biltmore, annual meeting.

December

4—Houston, Tex., annual meeting, Texas division, Mid-Continent Oil and Gas Association.

5-13—Detroit, Mich., First International Consumers Petroleum Exposition.

6-11—New York, National Exposition of Chemical Industries, Grand Central Palace.

15—Tulsa, annual meeting directors, Mid-Continent Oil and Gas Association.

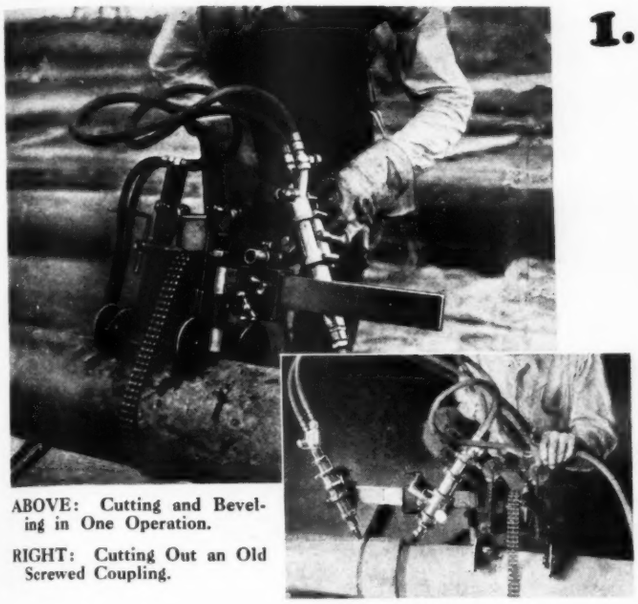
February, 1937

8-10—Louisville, Ky., Kentucky Petroleum Marketers Association, Brown Hotel.

April

15-16—Cleveland, Ohio, 34th semiannual meeting National Petroleum Association, Cleveland Hotel.

2 *Time-and-Money-Saving* PIPE WELDING Accessories



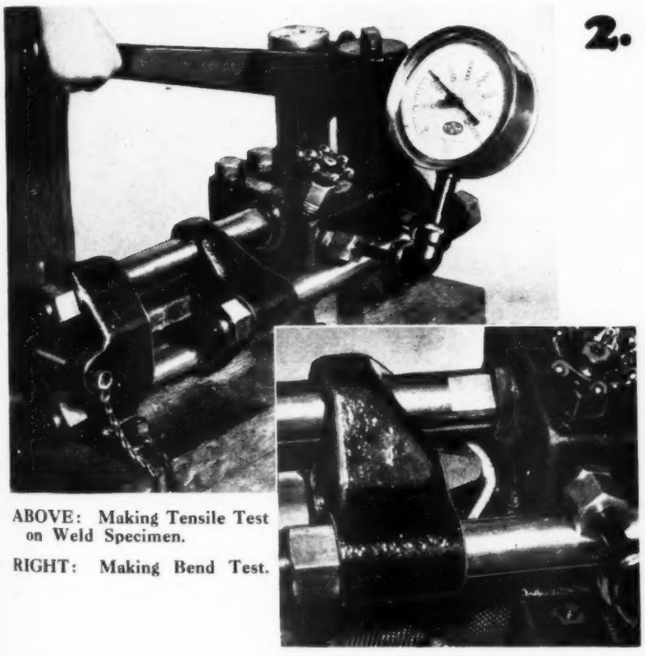
ABOVE: Cutting and Beveling in One Operation.

RIGHT: Cutting Out an Old Screwed Coupling.

1. *For preparing pipe for welding-in the field . . .*

The AIRCO-DB PORTABLE PIPE CUTTING and BEVELING MACHINE

This simple oxyacetylene cutting machine, cuts and bevels pipe for welding—*both in one operation.* One man can easily handle and operate it. Adjustments for a straight cut or for any desired bevel can be quickly made. The machine cuts fast, clean and true, leaving pipe ends square with pipe axis, free from burrs, slag and scale and ready for welding without further attention. Equipped with two torches, it is ideal for cutting out frozen screwed couplings. One turn around the pipe does it—leaving pipe ends ready for welding. Descriptive folder giving full details on request. Write for it.



ABOVE: Making Tensile Test on Weld Specimen.

RIGHT: Making Bend Test.

2. *For testing welds-in the field . . .*

The AIRCO-DB PORTABLE TENSILE and BEND TESTING MACHINE

With this compact, comparatively light machine, both tensile and bend tests of weld specimens can be made *right on the job*—and one man can do it. With a few strokes of the operating lever, direct loads up to 40,000 lbs. can be applied. By using specimens of smaller cross-sectional area than the maximum of 1½″ x ½″ loads equivalent to 150,000 lbs. per square inch can be applied. Operation requires little effort and is quick, accurate and dependable. Write for the illustrated bulletin which gives all details.

AIR REDUCTION
SALES COMPANY
General Offices: 60 East 42nd St., New York, N. Y.

DISTRICT OFFICES and DISTRIBUTING STATIONS in PRINCIPAL CITIES

Distributed in Texas by Magnolia Airco Gas Products Co., Houston, Beaumont, Wichita Falls, El Paso, Fort Worth and San Antonio
Represented in Canada by Railway & Engineering Specialties, Ltd., Toronto, Montreal, Winnipeg

A NATION-WIDE WELDING SUPPLY SERVICE

LAY·SET

Preformed

ROTARY LINES

•

DEPENDABLE

•

Time after time the installation of LAY-SET Preformed Rotary Lines have greatly reduced drilling costs, drilling interruptions, replacement time, labor involved in stringing, etc.

Literally hundreds of drillers have learned that LAY-SET Preformed Rotary Lines are uniformly dependable. . . . Particularly the Improved Plow Steel Green Strand.

HAZARD WIRE ROPE COMPANY
Wilkes-Barre, Pennsylvania
An Associate Company of American Chain Company, Inc.

In Business for Your Safety

•

Branches or Distributors
in all Oil Field Centers

GREEN SIGNIFIES SAFETY

LAY·SET *Preformed* Rotary Lines

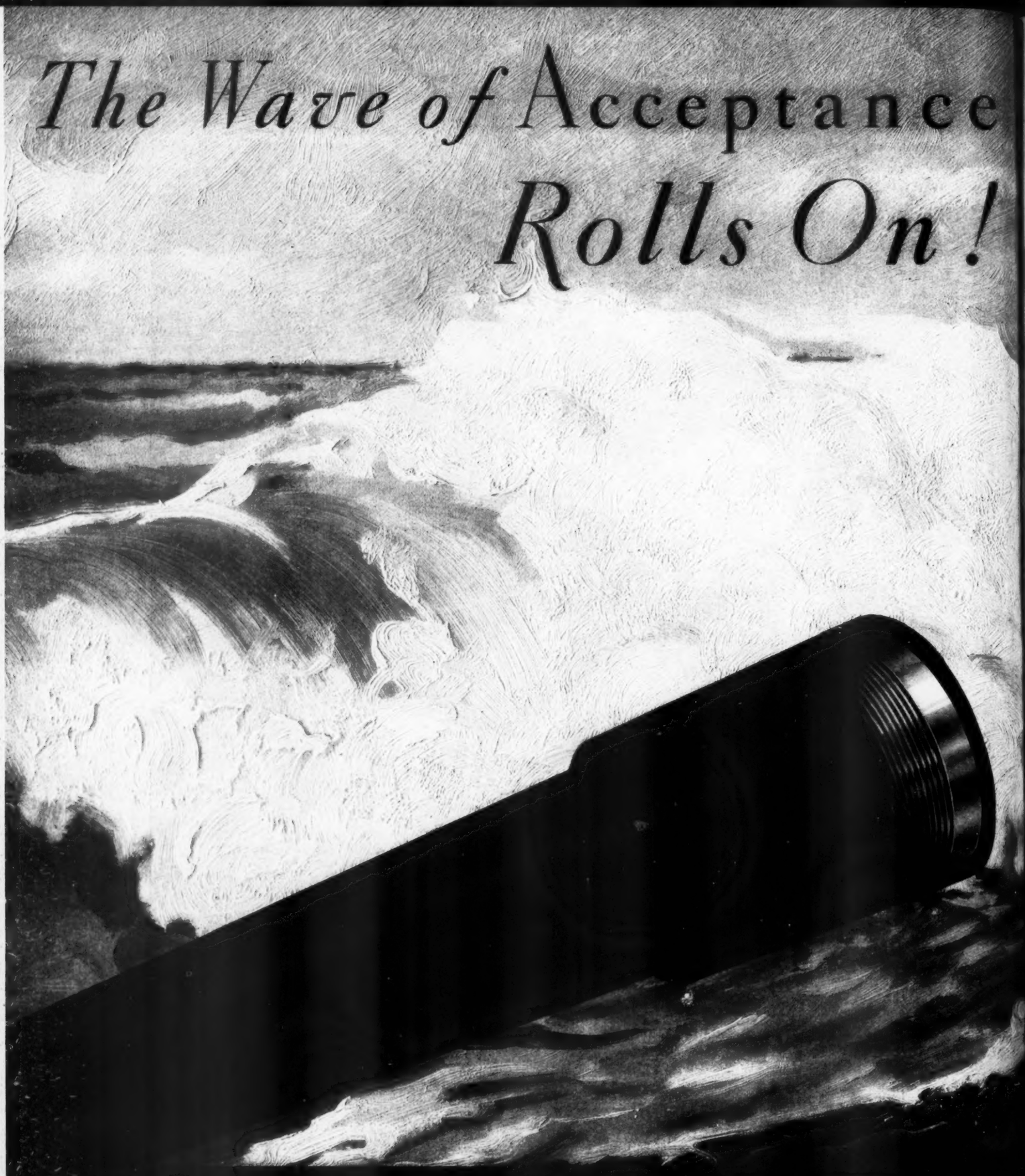
ALL HAZARD WIRE ROPES MADE OF IMPROVED PLOW STEEL ARE IDENTIFIED BY THE GREEN STRAND

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription prices: Domestic, $6.00 a year; foreign, $7.00 a year. Entered as second-class mail matter December 15, 1911, at the post office at Tulsa, Oklahoma, under the Act of March 3, 1879.

Never give RUST a "BREAK"..
For Sure Protection Use . . .
DUTCH BOY RED-LEAD
● The slightest opening in a paint film—the smallest break—is an invitation to rust to begin its destructive work. Never give rust a "break." Keep it from getting a start by painting your metal surfaces with Dutch Boy Red-Lead. Here is a paint that provides a solid, tough, tenacious coating—one that not only keeps out moisture but also resists the other common causes of corrosion, such as gases, smoke and salt water.
Dutch Boy Red-Lead comes in both paste and liquid form, the latter including a quick-drying type for use when allowable drying time is short. The pigment in every case is pure red-lead that contains more than 97% Pb_3O_4, thus assuring easier application, higher spreading rate and a uniform film of greater density.
For complete information on protecting iron and steel against corrosion, send for our free booklet, "Structural Metal Painting." It covers such subjects as the conditions affecting the life of paint on metal, proper paint formulation, testing and judging the value of paint, estimating areas and costs.
NATIONAL LEAD COMPANY
111 Broadway, New York; 116 Oak St., Buffalo; 900 W. 18th St., Chicago; 659 Freeman Avenue, Cincinnati; 1213 West Third St., Cleveland; 722 Chestnut St., St. Louis; 2240 24th St., San Francisco; 800 Albany St., National-Boston Lead Co.; National Lead & Oil Co. of Pa., Boston; National Lead & Oil Co. of Pa., 316 4th Ave., Pittsburgh; John T. Lewis & Bros. Co., Widener Bldg., Philadelphia.

[LITHARGE of correct physical character and extreme chemical purity is a necessity in oil refining. Such litharge is made by us. You can always rely on its unvarying uniformity. Our nearest warehouse can give you quick shipment.]

The Wave of Acceptance Rolls On!



A. O. SMITH CORPORATION

MILWAUKEE, WISCONSIN • *BRANCH OFFICES:* NEW YORK, TULSA, HOUSTON, LOS ANGELES

Making steel work for you as it never did before in—

SMITH HIGH-YIELD CASING

SMITH LINE PIPE—SMITH PRESSURE VESSELS

THE STABBING BOARD ... IS ALWAYS AT THE SAME LEVEL

As fast as the uniform 40′ lengths of HIGH-YIELD CASING come in through the derrick door, they are stabbed.

Stabbing is faster, make-up is faster, running is faster.

The man on the stabbing board is always in position. The costs and dangers of delay while the stabbing board is moved are avoided. The uniform length of HIGH-YIELD CASING is one of the elements that build up *its factors of safety and saving.*

They are:

Greater Collapse Resistance
Greater Pull-Out Strength
Greater Make-Up Speed
Greater Running Speed

HIGH-YIELD CASING

GREATER COLLAPSE RESISTANCE

HIGHER PULL-OUT STRENGTH

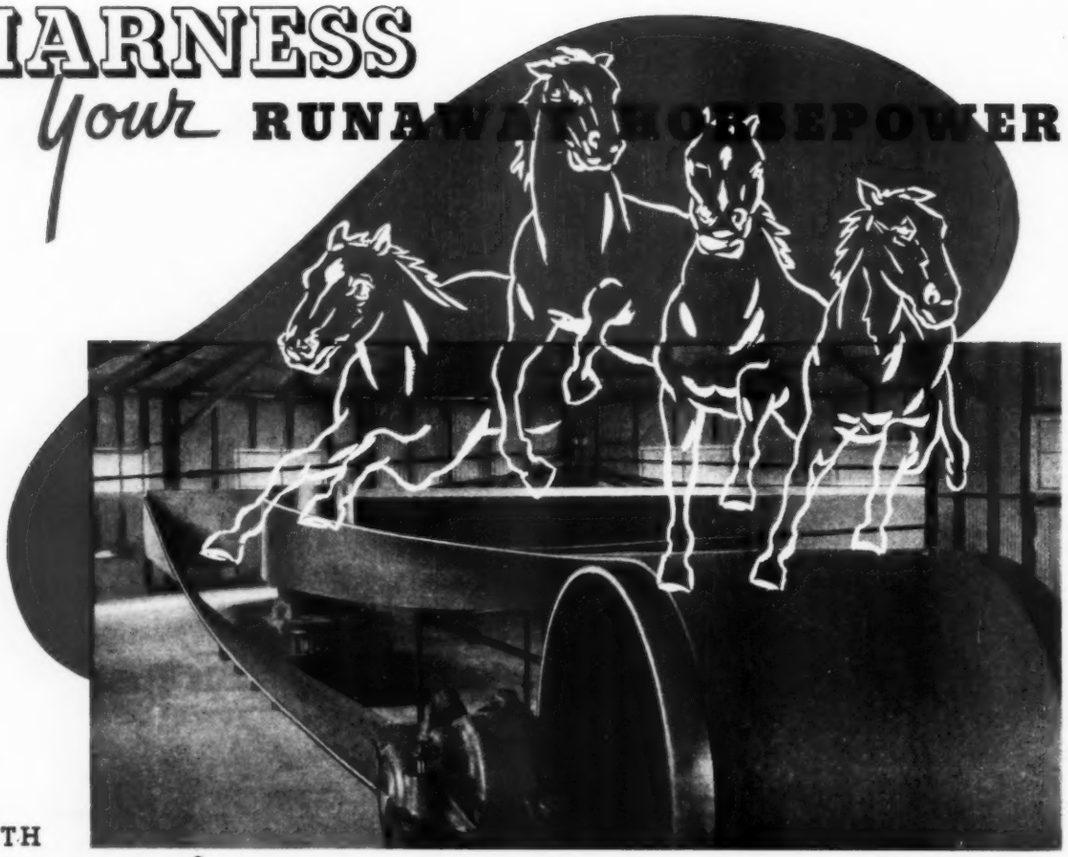
MORE FOR YOUR MONEY

HIGH YIELD CASING

LOWER-COST WELLS

Manufactured under
U. S. Patent No. 1,993,842
A. O. Smith Corporation, 1936

HARNESS *Your* RUNAWAY HORSEPOWER



WITH

SUPER EXCELO OIL COUNTRY BELTING

Branded with the A. P. I. Symbol and made to specifications that considerably exceed the A. P. I. minimum requirements.

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Frick-Reid Supply Corporation, Tulsa, Okla.
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W. C. Hendrie & Company, Inc., Los Angeles, Calif.
Pacific Coast Rubber Co., San Francisco, Calif.

★ Horsepower that slips off the pulley costs plenty of money but does no work. Check up on your old belts. They may be losing their grip and wasting enough horsepower to pay for new belts.

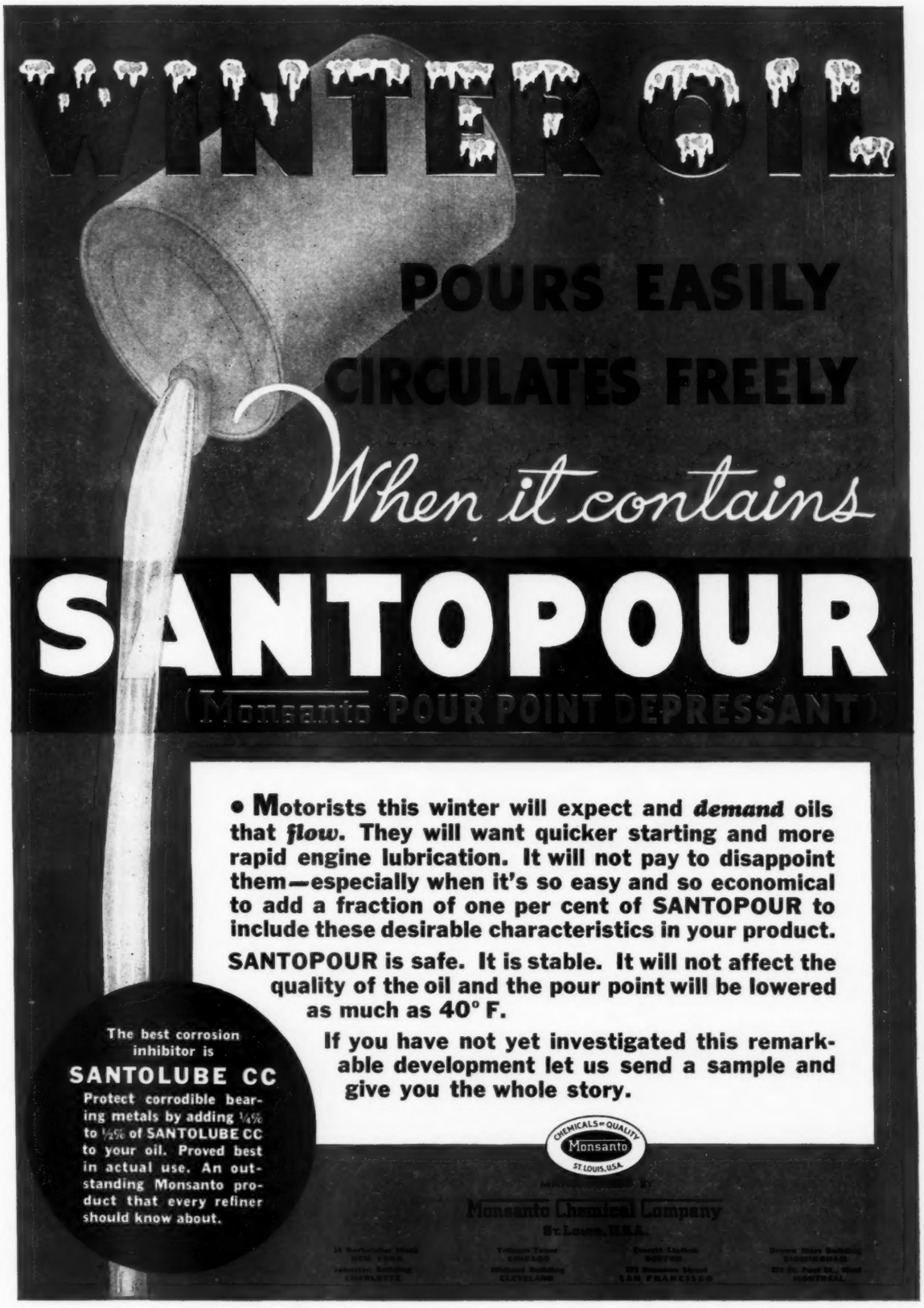
Super Excelo is noted for its powerful grip that lasts the full life of the belt and transmits maximum horsepower. Harness it to your toughest drives. You'll find it has the resiliency to absorb the heaviest shocks of quick reverses, starting under load and sudden stops. Take-up and adjustments on Super Excelo are few and far between because of the very low stretch.

Republic Distributors in all oil fields carry ample stocks of Super Excelo in various sizes. A call on the phone will bring you rapid delivery.

THE REPUBLIC RUBBER CO.

YOUNGSTOWN, OHIO

Manufacturers of Rotary and all other types of Hose, Transmission Belting, Packing, Gaskets, Rings, etc., for Oil Country Service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POURS EASILY
CIRCULATES FREELY
When it contains
SANTOPOUR
(Monsanto POUR POINT DEPRESSANT)
• Motorists this winter will expect and demand oils that flow. They will want quicker starting and more rapid engine lubrication. It will not pay to disappoint them—especially when it's so easy and so economical to add a fraction of one per cent of SANTOPOUR to include these desirable characteristics in your product.
SANTOPOUR is safe. It is stable. It will not affect the quality of the oil and the pour point will be lowered as much as 40° F.
If you have not yet investigated this remarkable development let us send a sample and give you the whole story.
The best corrosion inhibitor is
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Protect corrodible bearing metals by adding 1/4% to 1/2% of SANTOLUBE CC to your oil. Proved best in actual use. An outstanding Monsanto product that every refiner should know about.
CHEMICALS for QUALITY
Monsanto
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Monsanto Chemical Company
St. Louis, U.S.A.

Pictured at left is one of those dramatic scenes in the history of the oil industry. The first well in the new Rodessa (Louisiana) oil field has just come in and Columbian Bolted Tanks are on hand ready for the first flow of "liquid gold".

COLUMBIAN STEEL TANK CO.

"TANKS FOR THE WORLD"

KANSAS CITY, MO. U.S.A.

COLUMBIAN STEEL TANK CO. K.C. MO. COP-NIC COPPER-NICKEL ALLOY "TANKS FOR THE WORLD"

A battery of Columbian Cop-Nic Tanks in the sour crude district.

COLUMBIAN Bolted Steel Tanks have played an important part in the new Rodessa field ever since the first well came in. Wherever oil is produced you'll find Columbian Tanks predominating because Columbian has attained a distinct leadership in superior tank design and construction.

This leadership was recently proved again when Columbian laboratories perfected COP-NIC steel with a special galvanized coating for Columbian Bolted Tanks, which makes them highly resistant to corrosive action and perfect for use in sour crude districts.

The sheets from which these tanks are made are of selected base material. An exclusive galvanizing process is used to put on a heavy coating of zinc spelter which is applied in such a manner as to become virtually a part of the steel itself, minimizing the possibility of any pitting or loosening of the coating. The unusual results obtained with these COP-NIC Galvanized Tanks are attributed to the process used in preparation of the sheets, of the coating, and the manner of fabrication which does not destroy or render ineffective the galvanized coating.

FREE A new 32-page Columbian Tank Catalog full of actual photographs and information of interest to every oil man. Just check the coupon below for your free copy.

Distributors in all active fields maintain a large stock of Columbian Bolted Tanks and erection crews. Here they are:

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Longabaugh & Reid Tank Co., McCamey, Texas
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Biggs & Co., Wichita Falls, Texas
E. B. Gogerty, 564 Market Street, San Francisco, California
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COLUMBIAN STEEL TANK CO., Dept. R4, Kansas City, Mo., U.S.A.

Please send information on the following: ☐ Cop-Nic Tanks ☐ Regular Bolted Steel Tanks

Send me my free copy of the new Columbian Tank Catalog.

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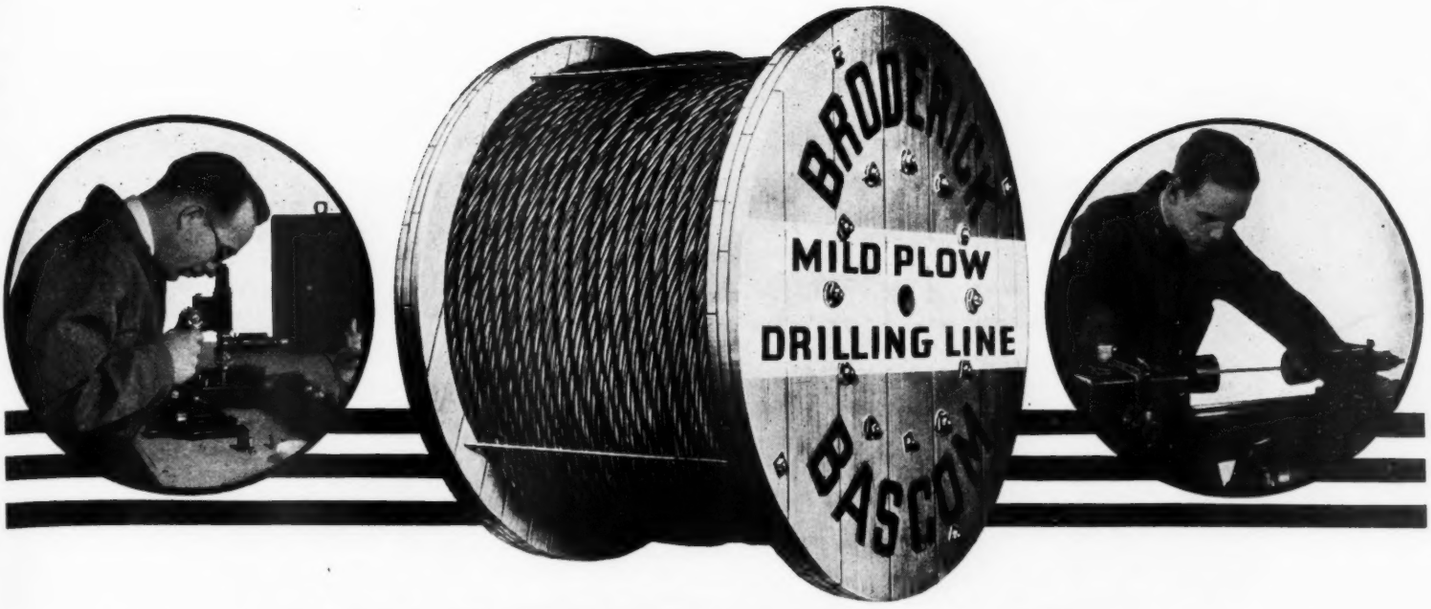

It MUST Be Good To Pass These WIRE CENSORS

Only the best wire is good enough for Broderick & Bascom Mild Plow Steel Drilling lines.

And only the best wire gets in, because only after passing the most rigid tests under the watchful eyes of our engineers, is wire rated high enough for such important use.

60 years making nothing but wire cable has taught us how to take this super-wire, and twist it into drilling lines that give remarkable service and economy in cable tool drilling.

Let your next be a Broderick & Bascom Mild Plow Steel Line.

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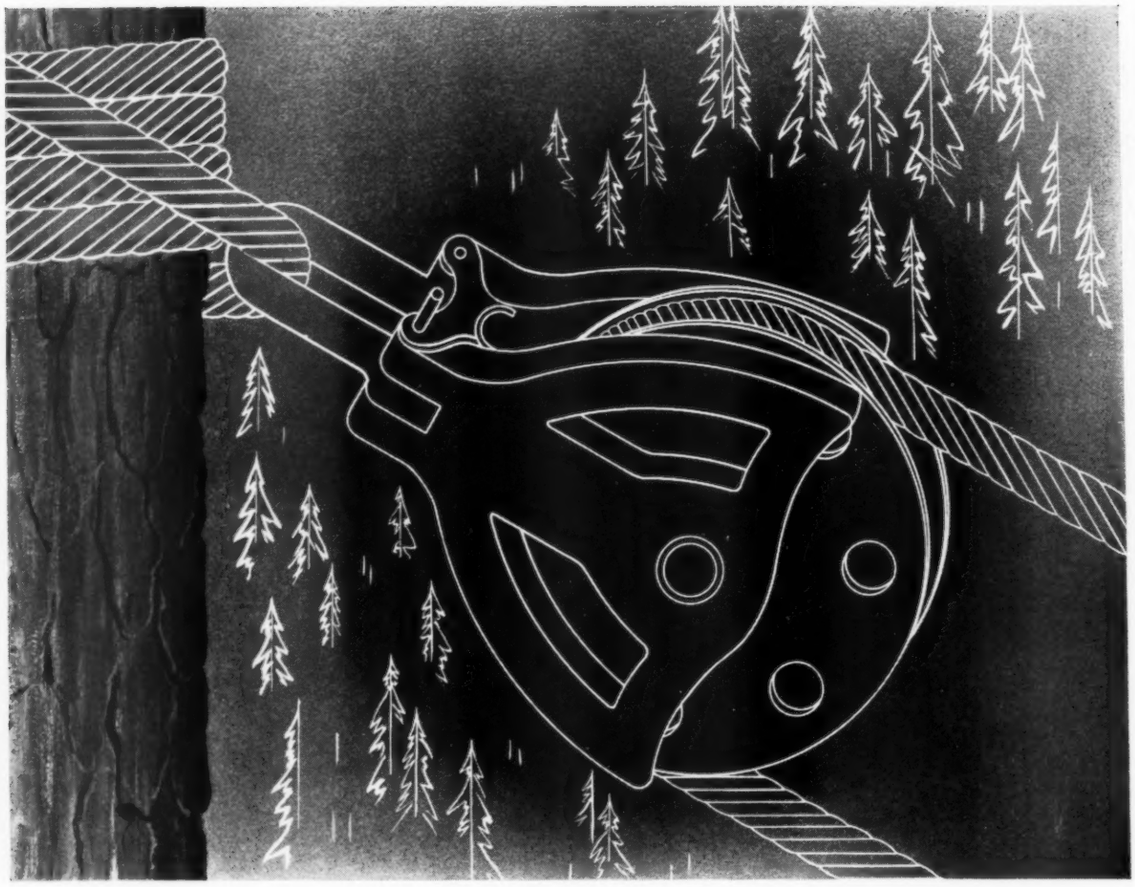
The Continental Supply Co.

Mid-Continent Distributors
Adequate Stocks in all active fields.



MOLY steel's greater strength means less weight—easier handling

When operating equipment has to be handled by man-power, the importance of light weight through the use of the strongest possible material comes home with telling effect. Logging blocks, for example. Ask any rigger what a back-breaking job it is to tote them aloft. Think, too, of the abuse they get. . . . Dropped from great heights, battered and banged around, exposed to weather—it's a hard life they lead.

By making side frames and sheaves out of 2% Nickel-0.40% Moly steel, the weight of logging blocks can be reduced one-third to one-half—without sacrifice of strength. Similar foresight in the construction of other forms of industrial equipment can lead to corresponding savings in time, labor, wear, depreciation.

What do you make or use that would gain through lighter weight, higher strength, greater resistance to impact, abrasion, creep, corrosion? Look into Moly and its many-sided qualities for improving any steel or iron—whether plain or otherwise alloyed. Our helpful technical book, "Molybdenum," goes into the subject at considerable length. Yours for the asking—as is also our periodical news-sheet, "The Moly Matrix." If interested in some particular ferrous problem, our laboratory facilities are at your disposal.

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PRODUCERS OF FERRO-MOLYBDENUM, CALCIUM MOLYBDATE AND MOLYBDENUM TRIOXIDE

MOLY Mo-lyb-den-um

CUTS COSTS

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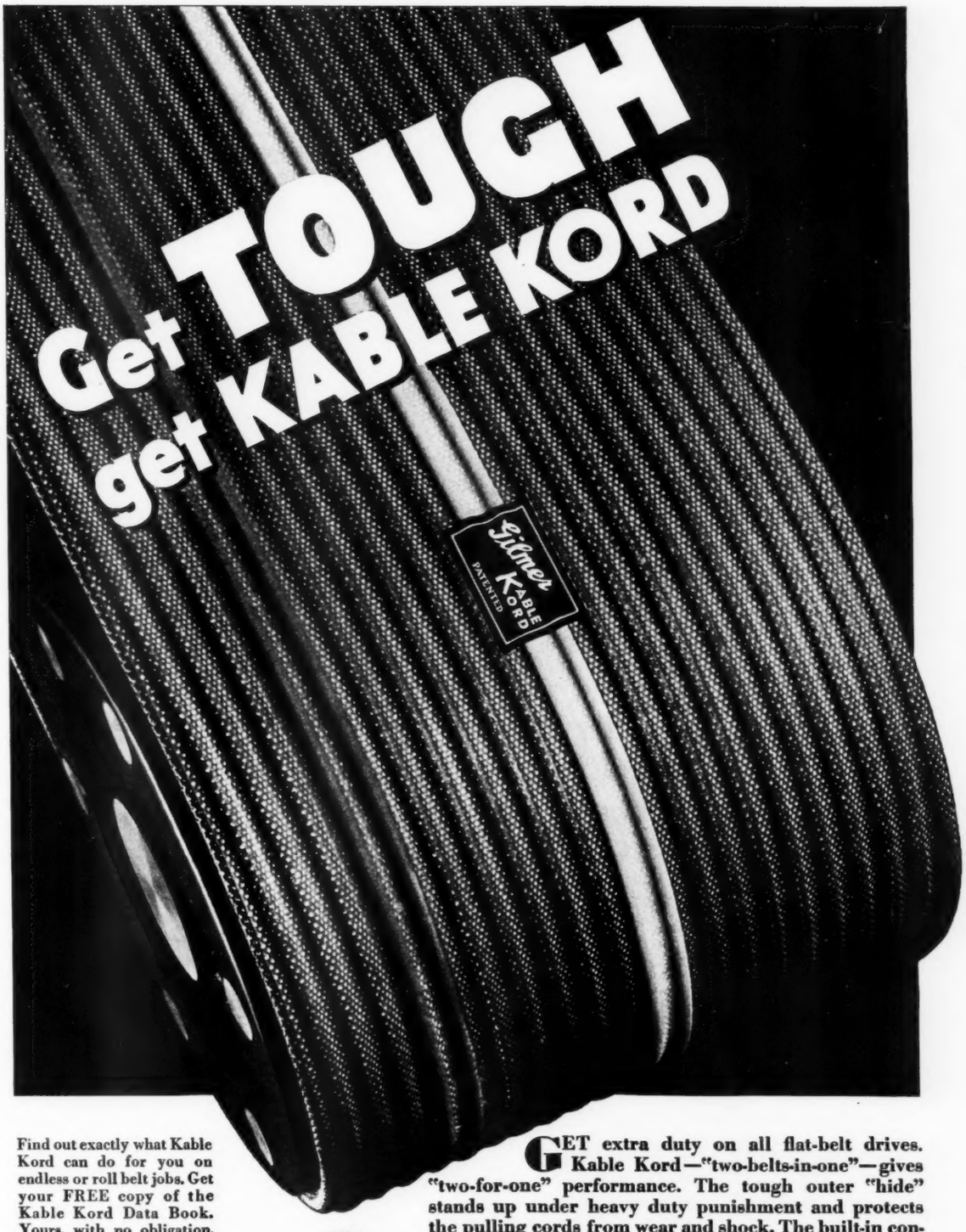

Find out exactly what Kable Kord can do for you on endless or roll belt jobs. Get your FREE copy of the Kable Kord Data Book. Yours, with no obligation.

NORVELL-WILDER SUPPLY CO.
Beaumont, Houston and Fort Worth, Texas
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R. & J. DICK COMPANY
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Pacific Coast Distributors

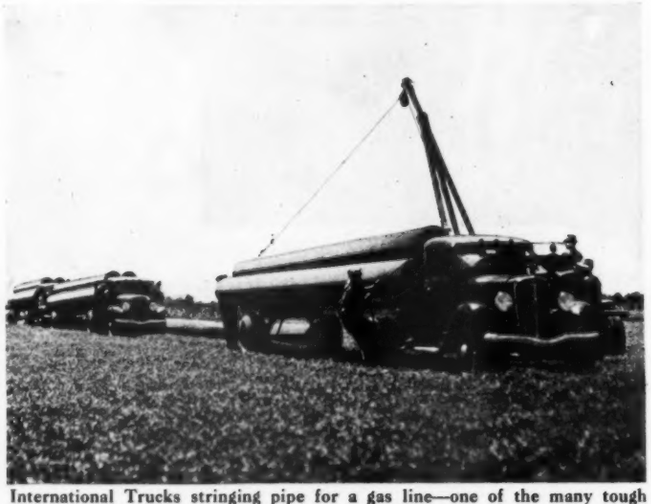
Gilmer BELTS

GET extra duty on all flat-belt drives. Kable Kord—"two-belts-in-one"—gives "two-for-one" performance. The tough outer "hide" stands up under heavy duty punishment and protects the pulling cords from wear and shock. The built-in contactor cords squeeze the pulling cords tightly against the pulley, give a snugger grip that cuts out slip, and deliver *more actual pull per square-inch than any other flat belt made.*

L. H. GILMER COMPANY, Tacony, Philadelphia

International 5 to 7½-ton Model A-7 Truck pulling tubing in the Oklahoma City field for Barnsdall Oil Company.

Only ALL-TRUCK Construction Can Give You the Most for Your Money



International Trucks stringing pipe for a gas line—one of the many tough jobs the oil industry turns over to Internationals because these rugged trucks have proved they can take it.

LOW-COST operation and trouble-free mileage—the *only* kind of economy that counts—are well known to International Truck users.

Thirty years of truck-manufacturing experience have convinced us that only *all-truck* design and construction can serve truck users satisfactorily. International Harvester builds no automobiles; makes no compromise with passenger-car construction. *Every one* of the 31 International models is *all-truck* all the way through. *Every one* is designed and built for the hauling jobs in its class.

Owners know that Internationals give them the most for their truck dollars in economy, service, and long life. Ask them to tell you their story of International Truck performance. Then call our nearest Company-owned branch, or dealer, for a demonstration. Internationals range in size from the Half-Ton unit up. Chassis prices start at $415 f. o. b. factory.

INTERNATIONAL HARVESTER COMPANY

606 So. Michigan Ave. (*Incorporated*) Chicago, Illinois

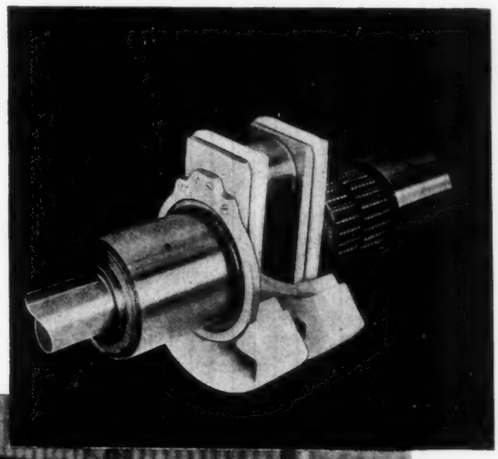
INTERNATIONAL TRUCKS

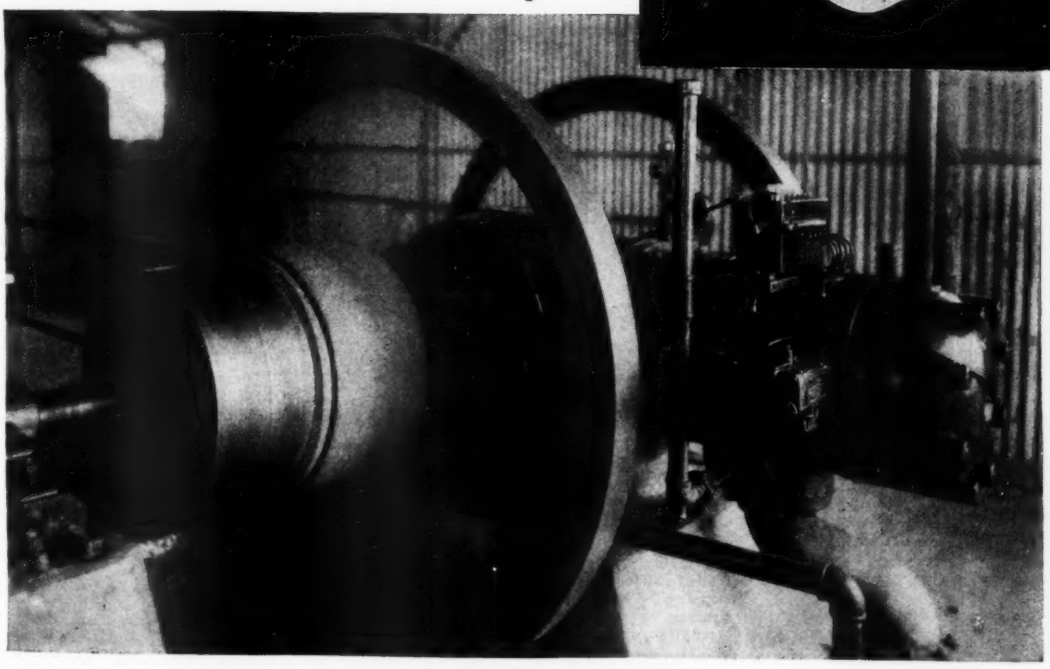
TO KEEP DOWN UPKEEP

...SPECIFY

HYATT

Roller Bearings





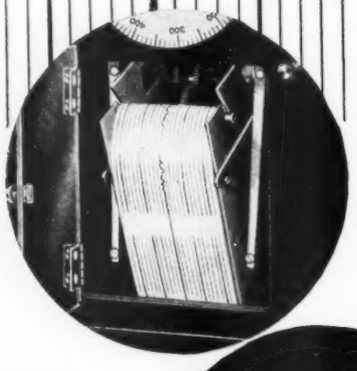
Hyatt Roller Bearings are used, as illustrated, on the Crankshaft of WEBER ENGINES built by the WEBER ENGINE COMPANY, KANSAS CITY, MO. Describing this application they state, "After six years of field installations we have never sold a replacement bearing. Such a record speaks for itself for a rugged crankshaft mounted in trouble-free bearings."

For longer life, simplification of design, and freedom from constant maintenance, the manufacturers of better equipment "build-in" Hyatt Roller Bearings. Engineers select Hyatts for long, hard service wherever wear and attention are to be eliminated to the last possible degree. Therefore it pays to specify and get Hyatt Roller Bearings for all your operating equipment. Hyatt Roller Bearing Company, Newark, Detroit, Chicago, Pittsburgh, San Francisco.

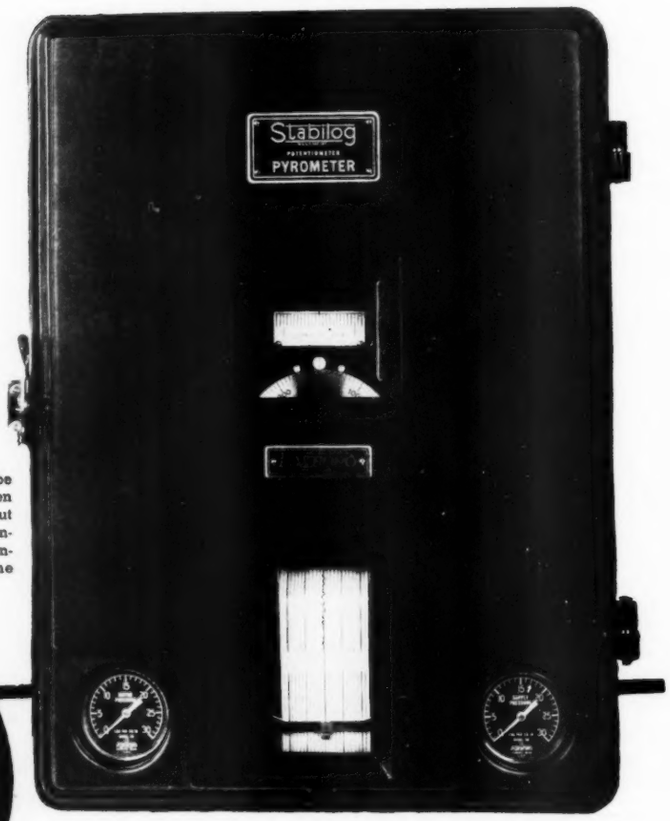
1 P. M.

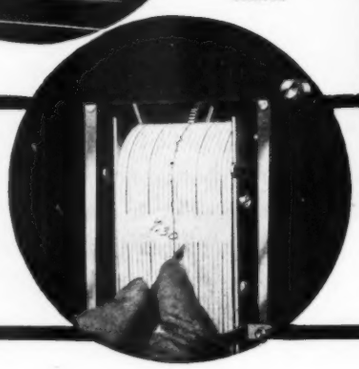
IT HAPPENED AT 1:30 P.M.

2 P. M.



The chart can be changed and pen refilled without stopping the instrument or interrupting the control.





A writing platen under the chart gives a firm support for jotting down notes.

DEVIATION HELD TO A MINIMUM..

Recorded, and Returned to Control Setting..by

STABILOG POTENTIOMETER

Here is a true record of temperature *control* of vapors leaving a vacuum tower refluxed with light gas oil. A temporary deviation from setting occurred following an unbalance of process conditions. The speed with which the Stabilog Potentiometer returned the temperature to control setting and the fact that the deviation was held to a minimum and quickly returned to setting is evidenced by the chart.

An exact record of *results* is thus provided... plus a record of deviation. It is a good example of "close control"—the capacity to maintain a predetermined temperature with negligible deviation. The Stabilog Potentiometer gives you everything you need in control recording without sacrificing any inherent sensitivity. Recording does not affect the control action nor the measuring function in any way—and the 2-inch chart is inexpensive.

If you are interested in true low-cost recording of control deviations you will find the Stabilog Potentiometer an outstanding instrument for maintaining efficient operation of pipe stills, fractionating towers, and other similar equipment. New Bulletin 194-1 is yours for the asking.

THE FOXBORO COMPANY
60 Neponset Avenue
Foxboro, Mass., U.S.A.
Branches in 25 Principal Cities

RECORDING

CONTROLLING

INDICATING

for

TEMPERATURE

PRESSURE

FLOW

LIQUID LEVEL

HUMIDITY

Foxboro **Stabilog** REG. U.S. PAT. OFF.

ACCURACY FOXBORO *RESPONSE*

First Choice IN THE RODESSA FIELD

MAJORITY OF WELLS EQUIPPED WITH NAYLOR SPIRAL LOCK-SEAM WELDED SURFACE CASING

•

Structural advantages have won the preference for Naylor Surface Casing in the Rodessa field.

Exclusive with Naylor, the Spiral Lock-Seam Welded structure has proved so dependable in performance that the majority of wells drilled in this new field are equipped with Naylor Surface Casing.

Chief advantages of this distinctive structure: The Spiral on the outside helps to centralize the Casing in the hole. The Spiral provides a "breathing space" around the Casing, insuring a better cementing job.

Light weight, uniform lengths of 30 feet—or as otherwise specified—and ends threaded accurately to A.P.I. Standards simplify handling and setting.

Casing ends are equivalent in O.D. to heavy Standard Casing and are long enough to accommodate derrick clamps, slips and tongs. Naylor Casing is interchangeable with A.P.I. Standard Casing and is furnished in Standard diameters of 13⅜" O.D., 16" O.D., 18⅝" O.D., 20" O.D. and 21½" O.D.

For complete information and prices, call our distributor or any jobber of oil field equipment.

NAYLOR PIPE COMPANY
CHICAGO, ILLINOIS

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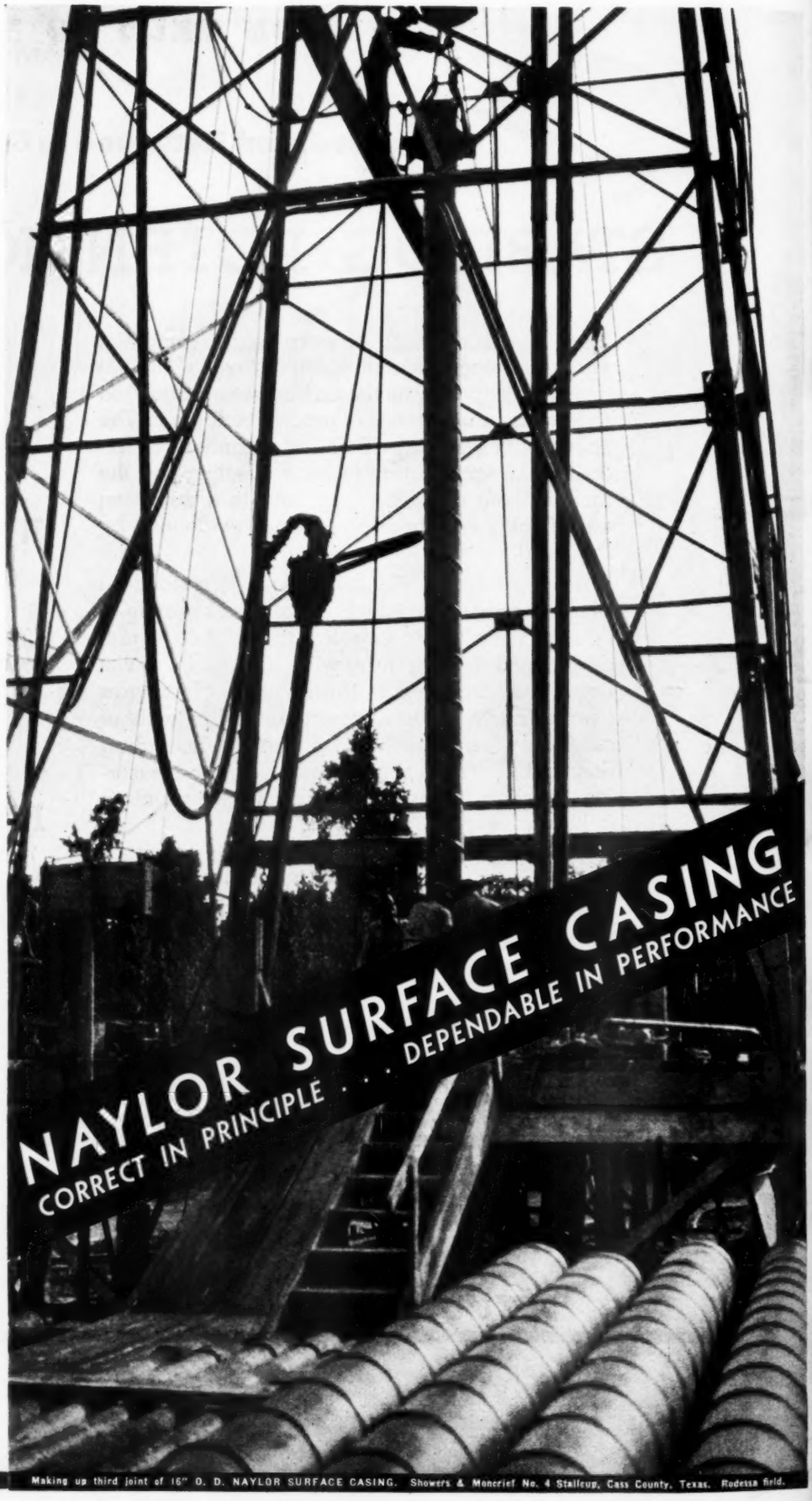
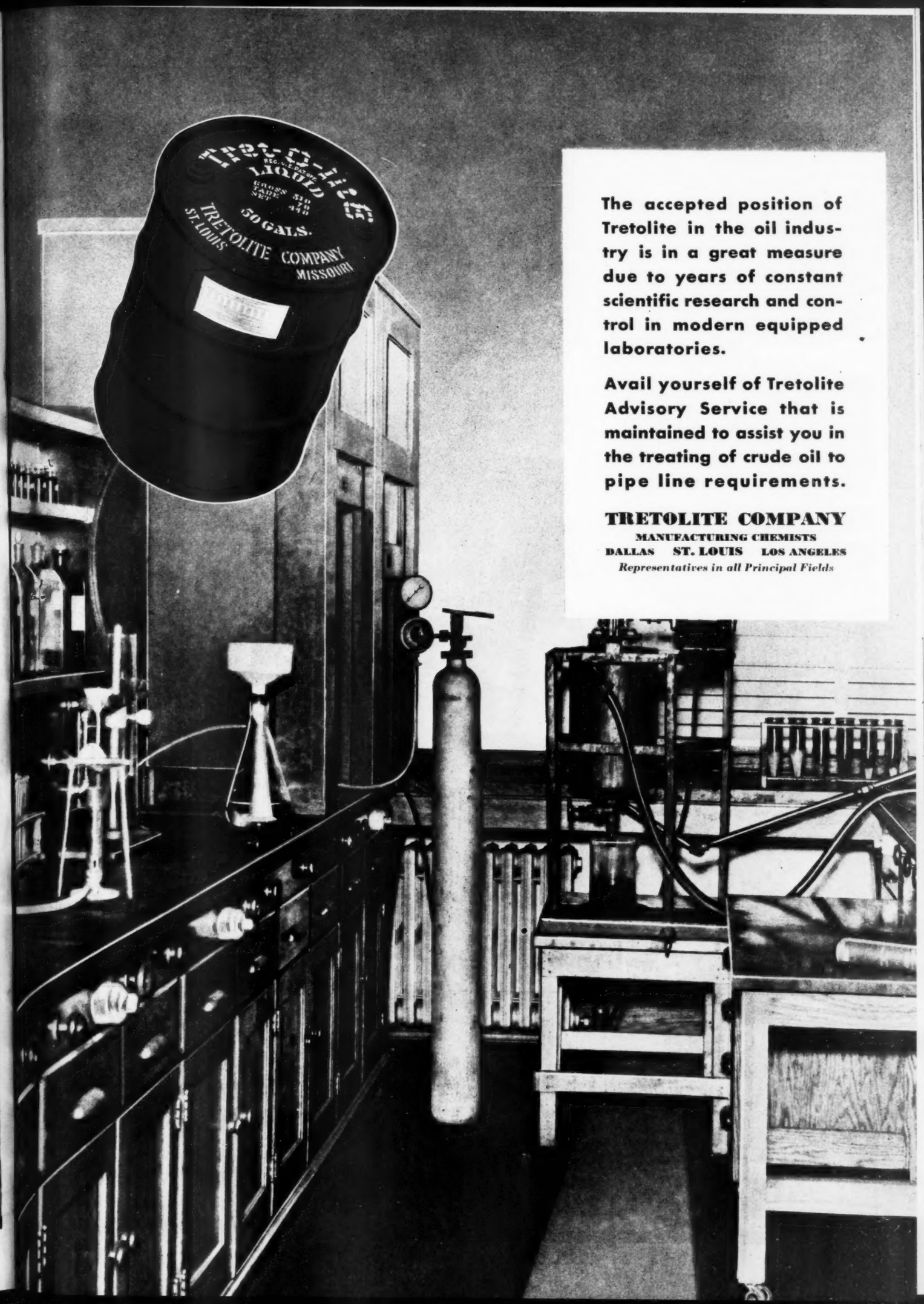
MID-CONTINENT SUPPLY COMPANY
FORT WORTH, TEXAS, AND BRANCHES

EXCLUSIVE DISTRIBUTOR
IN ARKANSAS, KANSAS, LOUISIANA, NEW MEXICO, OKLAHOMA, AND TEXAS



Making up third joint of 16" O. D. NAYLOR SURFACE CASING. Showers & Moncrief No. 4 Stallcup, Cass County, Texas. Rodessa field.



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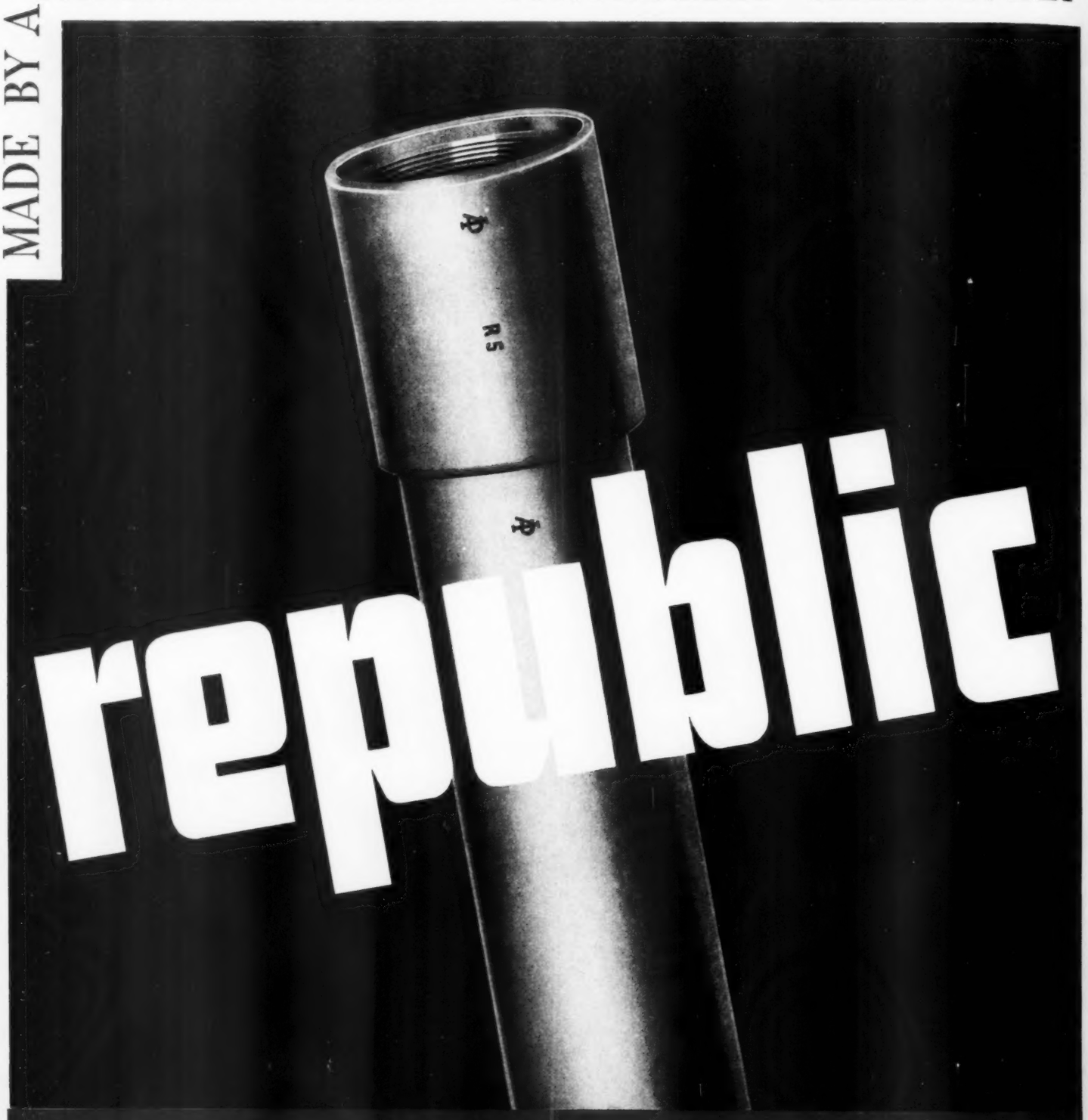

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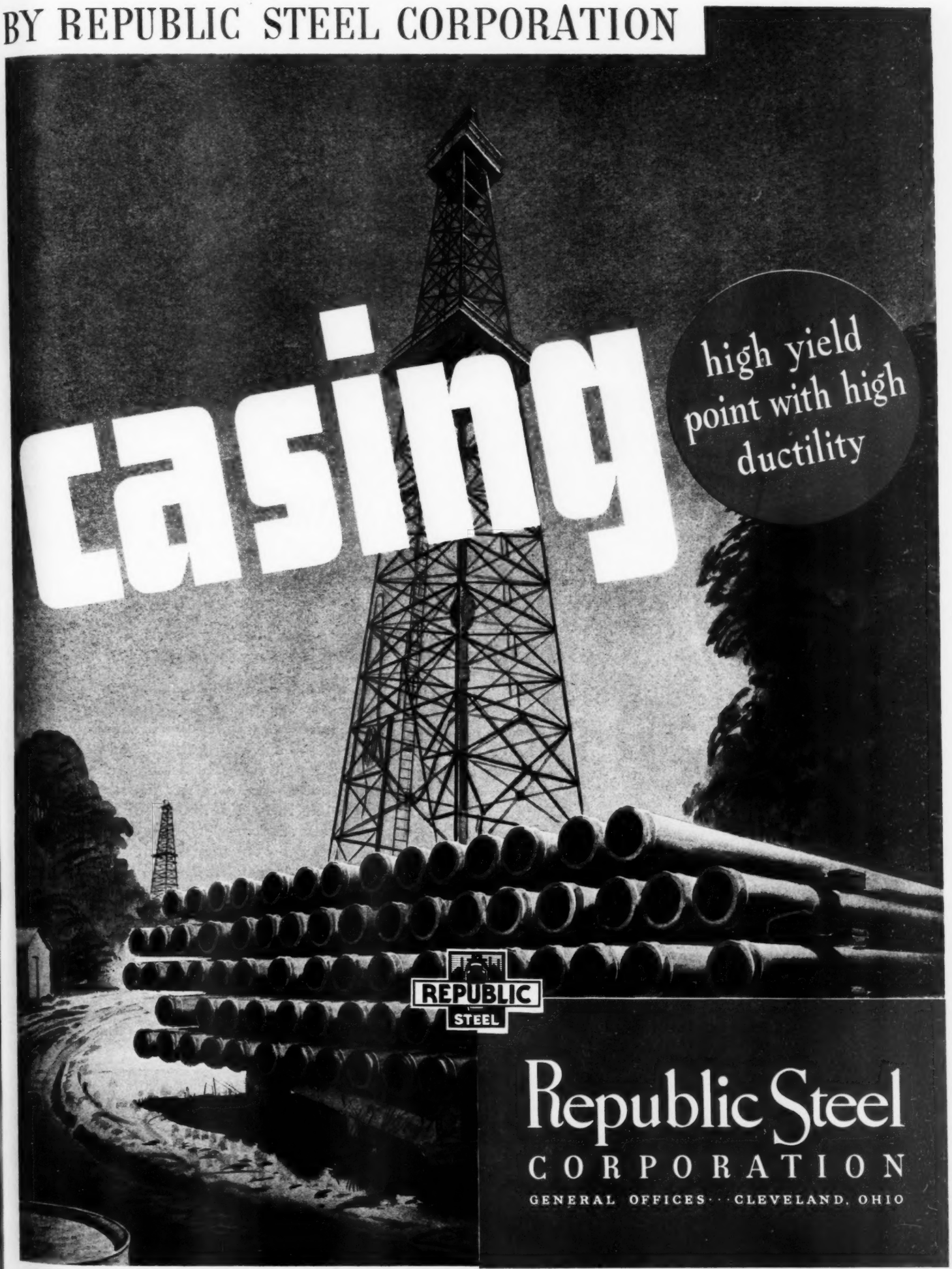

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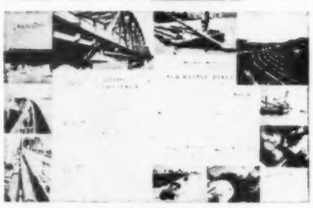

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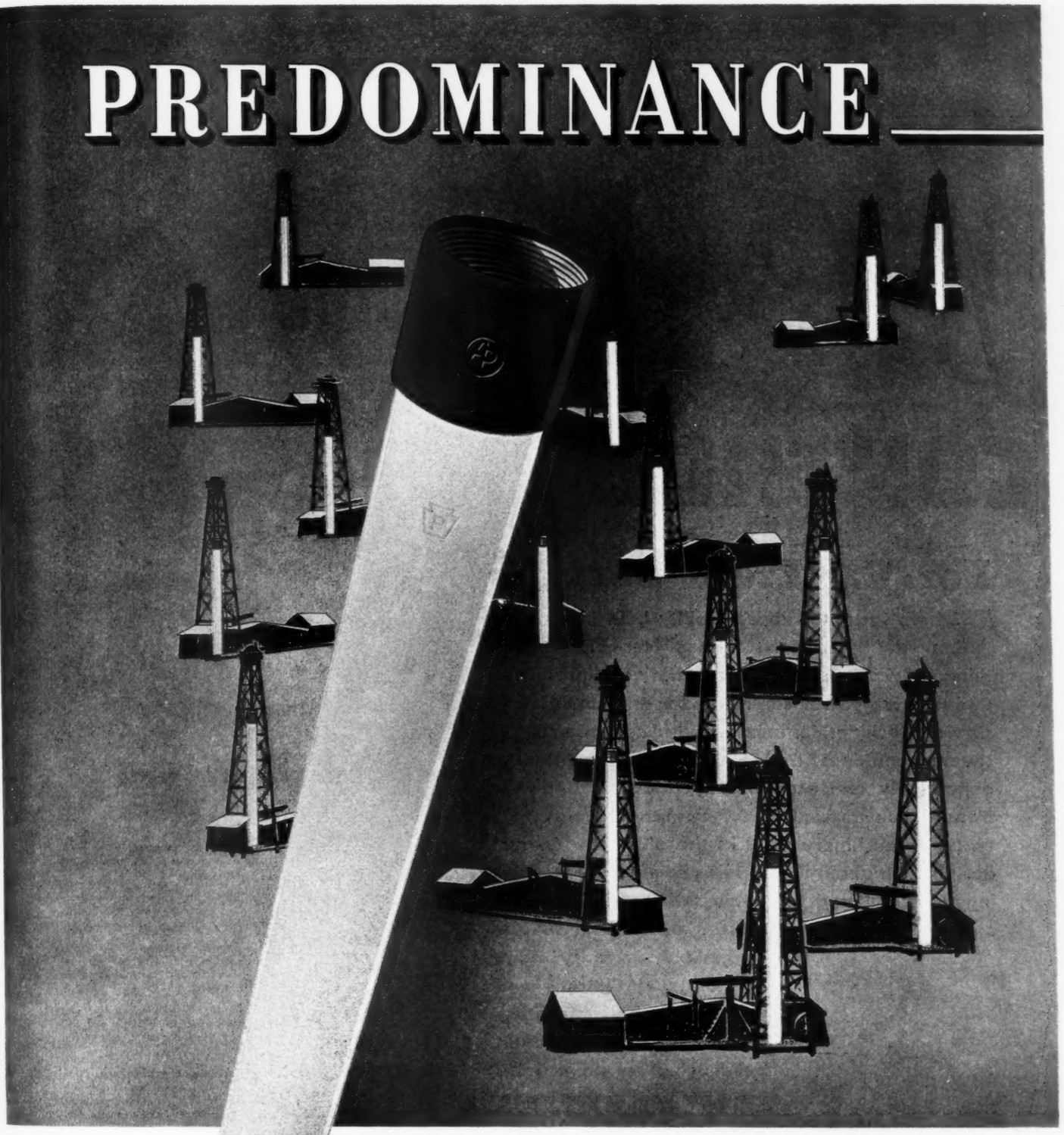

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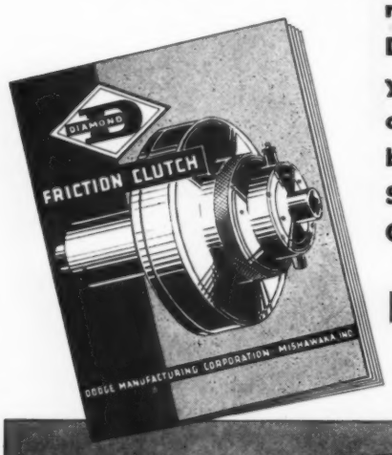

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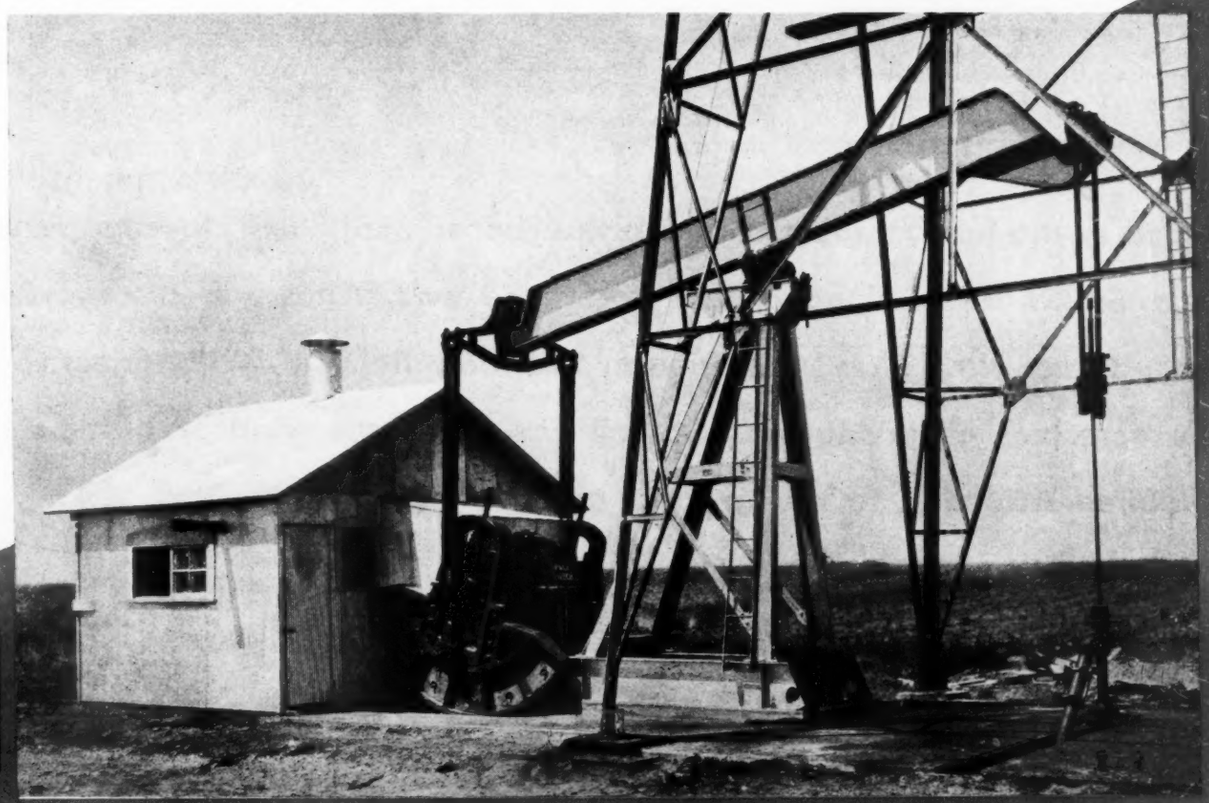

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